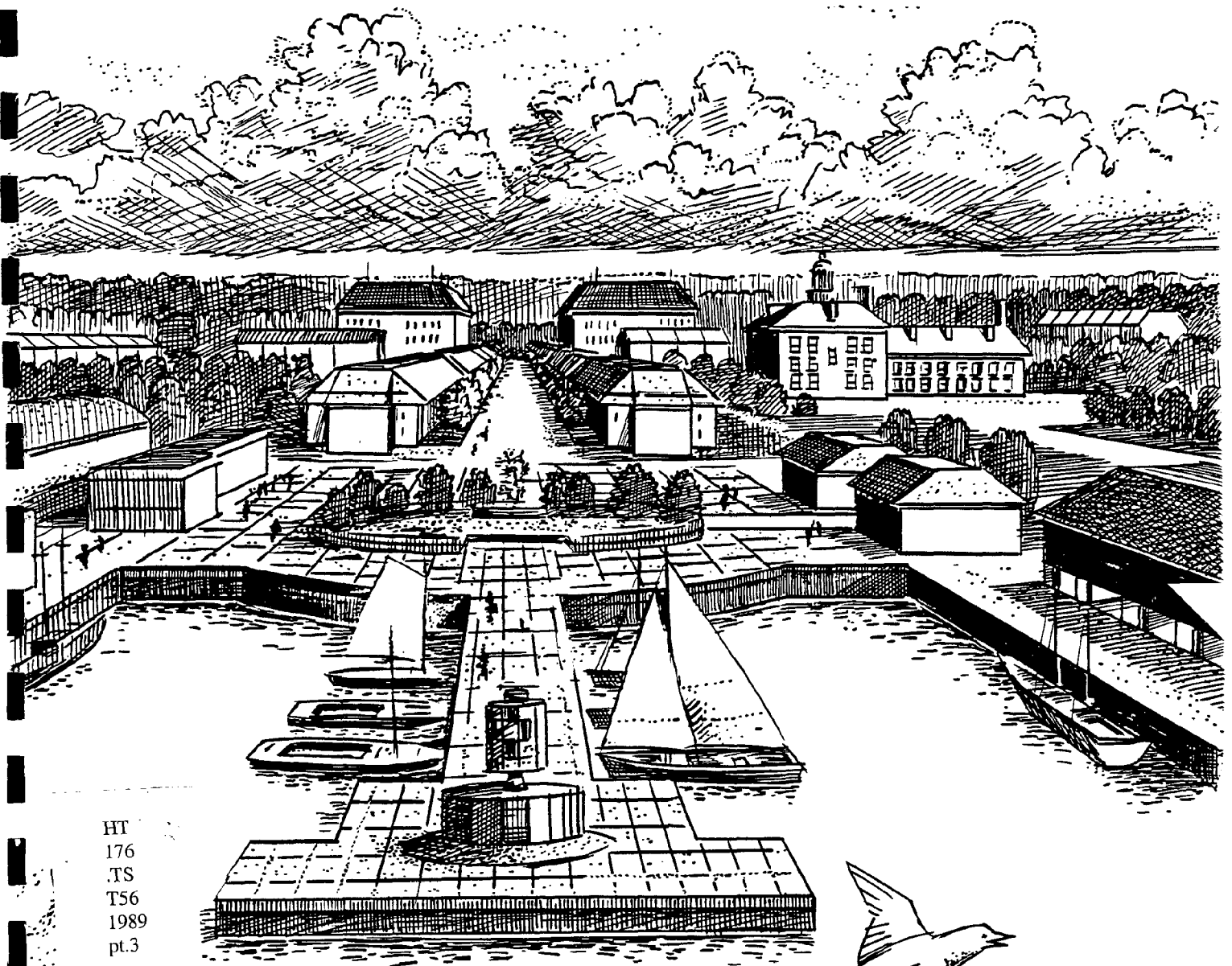


TINICUM WATERFRONT VISION FOR YEAR 2000



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**Part Three
Background II
RDC Institute**

TINICUM TOWNSHIP
WATERFRONT FEASIBILITY ANALYSIS

PART IIII

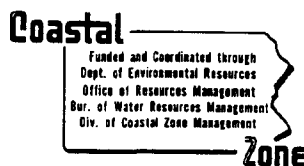
BACKGROUND II

TINICUM TOWNSHIP
DELAWARE COUNTY, PA

JULY 1989

RDC INSTITUTE, INC.
UPLAND, PA 19015

HT 176. TS 1989 P73
The preparation of this report was financed thorough the Pennsylvania Coastal Zone Management Program under provisions of the Coastal Zone Management Act of 1972, administered by the Division of Coastal Zone Management, Office of Resource Management, Pennsylvania Department of Environmental Resources.



Consultant Services for the
Tinicum Waterfront Feasibility Analysis
were provided by
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SECTION I

PREAMBLE

The Tinicum Waterfront, like most other waterfronts in this country, was, until recently, one of the most neglected resources of our time. Waterfronts were allowed to deteriorate as a result of underutilization, inadequate planning, and lack of private investment into new water-related projects. Because of this type of neglect, Tinicum is now experiencing all the problems associated with the declining properties fronting on waterways. Some of these problems consist of conflicting land uses, deteriorating piers and bulkheads, siltation of navigable waters, and lack of public access to the river.

RDC Institute, Inc. (RDC), a private, non-profit economic development organization whose major mission is to encourage and stimulate economic growth, received a grant from the Pennsylvania Coastal Zone Management Program as a beginning to combat these conditions. This grant has been used to develop a Tinicum Township Waterfront Action Plan. The principal objectives of this project are to stimulate economic activity, encourage the construction of a public boat ramp, and make recommendations regarding physical improvements to both off-shore and on-shore conditions. This document presents a strategy for transforming the Tinicum Waterfront into a more attractive, accessible waterfront which will provide efficient use of properties and enhance economic activities in the community.

Because of the complexity of issues related to this project, RDC sought the services of a private consultant with extensive and combined experience in economic development, real estate marketing, marina, and waterfront development.

Through a competitive selection process, Land Design/Research, Inc. (LDR) of Columbia, Maryland was selected as a consultant. LDR is recognized nationally and internationally for its successful design of urban waterfronts, mixed-use developments, and town center revitalization strategies.

The Delaware County Planning Department (DCPD) was also added to the project team to bring to bear their extensive knowledge of local attitudes, government policies and land use objectives, as well as their specific expertise in demographics, land use characteristics, and data collection and analysis.

Together, these three agencies have developed a strategy to bring Tinicum's waterfront back to full potential.

The report is structured into a three-part document. The three-part format is used to present the Action Plan and supporting documents in a simplified method, so township officials, existing property owners, and prospective private investors can use this document with the greatest of ease. Part I explains the development plan and the steps that are necessary to implement improvements. Parts II and III examine the data that was analyzed and the rationale supporting the recommendations. They can be appreciated separately or referenced together for a complete overview.

Part I. "Action Plan"

This section is the result of the analyses of the economic, physical, and regulatory environments of the community. It contains the recommended development program that envisions the Tinicum Waterfront in the future. It identifies appropriate water-related and water-dependent uses for future development and other areas for physical improvement. The Action Plan is an identification of a series of actions that need to be carried out to accomplish the development program. It provides the immediate and long-range steps that must be taken to bring Tinicum's Waterfront to full potential.

This section can benefit anyone who has an interest in investing in the Tinicum Waterfront. Also, it is a guide to assist government officials in their public policy deliberations regarding the waterfront area.

Part II. "Background I"

This section discusses the economic and demographic conditions of the region. It also discusses off-shore conditions, such as the severe siltation and shoreline conditions. Alternative scenarios for addressing shoreline stabilization are discussed in this section, and a detailed section of assessment of the residential market, marina slips and dry storage market support is included. This section helps the reader understand why certain recommendations were made for new waterfront development.

Part III. "Background II"

This section consists of data that was analyzed for input into the Action Plan. It discusses the demographics at the local level and identifies certain trends within the project area. It also discusses policy documents such as the Township's Comprehensive Plan and Zoning requirements for waterfront development and provides information on existing infrastructure and public services within the community. Regulations at the local, state and federal levels which must be considered when contemplating waterfront development are also discussed.

The Tinicum Waterfront Action Plan has been developed for the purpose of bringing the Tinicum Waterfront to its full potential. There are many opportunities and constraints to new water-related and water-dependent uses along the Tinicum Waterfront. This Plan does not provide all the answers, but it is an initiative to begin the transformation. We trust that this Action Plan will serve as a valuable resource for public officials making decisions, existing property owners who considering improvements to their properties and prospective private investors interested in the Tinicum Waterfront.

SECTION II

DEMOGRAPHICS - LOCAL/TINICUM TOWNSHIP

Introduction

The purpose of this section is to examine the demographic characteristics of those persons who may be directly impacted by development activities in the study area. The source for all of the statistics presented here is the 1980 Census (unless otherwise indicated). In some cases we have been able to speculate about changes which have taken place since the 1980 Census was taken; such changes have been indicated at the end of the text.

It should also be noted that in order to examine the demographic characteristics of the specific study area, it is necessary to go to the block level of the data statistics. Unfortunately, most detailed demographic data is unavailable at this level. Therefore, due to the small population actually living in the study area (only 3.64% of the entire Township's population) and the lack of data at the block level, we have focused the detailed demographic evaluation on the one census tract which contains the neighborhood most likely to feel the landside impacts of activities along the waterfront. Specific study area data was included in the following text and tables, as available.

Population Density

According to the 1980 Census, Tinicum Township had a resident population of 4,291 persons. As can be seen in Table 1, in 1980 only 242 acres (4.21%) of the Township's entire 5,745 acre land area was developed for residential use. This means that although the overall population density of the Township was .75 persons per acre, the actual density in the residential portions of the Township was 17.73 persons per acre.

TABLE 1

1980 ACREAGE BY LAND USE

	<u>Acres</u>	<u>Percentage</u>
Residential	242	4.21
Forest/Undeveloped and Water	3,590	62.50
Transportation	1,579	27.48
Remainder (mfg., comm., rec., etc.)	<u>334</u>	<u>5.81</u>
TOTAL	5,745	100.00%

SOURCE: adapted from the Delaware Valley Regional Planning Commission "Land Use Data in the Delaware Valley 1970 and 1980 Data in 12 Categories," May 1984.

For the purpose of demographic analysis, it should be noted that the Township is comprised of two census tracts, seven block groups, and a number of individual blocks (see Figure 1). As can be seen in Table 2, in 1980, 100% of the Township's population resided in the western portion of the Township. Of this population, 2,323 persons (54.14%) of the Township's population resided in Census Tract 4037.02, the tract containing the bulk of the study area's population.

TABLE 2

1980 POPULATION BY TRACT AND BLOCK GROUP

Tract 4037.01	1,968	45.86%
Block Group 100	545	
Block Group 200	559	
Block Group 300	840	
Block Group 900*	24	
Tract 4037.02	2,323	54.14%
Block Group 100	988	
Block Group 200*	1,086	
Block Group 900	249	
TOTAL	4,291	100.00%

*. Study area block groups

The major reason for this concentration of population is due to the fact that at one time almost all of the Township could have been considered wetlands and construction was forced to take place on high ground and fill. To this day, much of the Township's land area is still comprised of wetlands (Tinicum National Environmental Center) and low-lying fill (Philadelphia International Airport).

Population Count

The specific study area draws its population from more than one census tract. Table 3 is a breakdown of this population by tract, block group, and block.

TABLE 3

1980 STUDY AREA POPULATION COUNT

	<u># Persons</u>	<u>% of Study Area</u>
Tract 4037.01		
Block Group 900		
Block 903	24	
Block 904	0	
Tract Total	24	13.33%

FIGURE 1
CENSUS TRACTS

TINICUM TOWNSHIP

4037.02

CENSUS TRACTS

100

BLOCK GROUPS

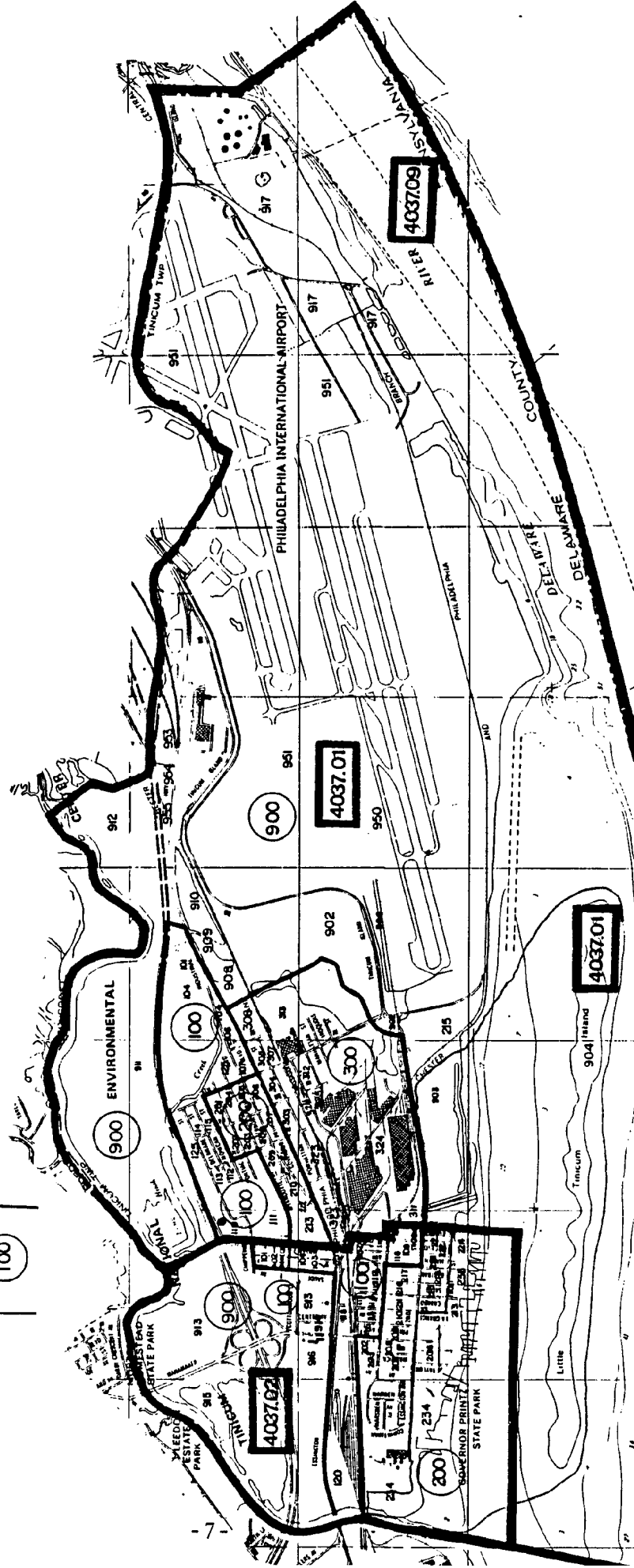


TABLE 3

1980 STUDY AREA POPULATION COUNT
(CONTINUED)

	<u># Persons</u>	<u>% of Study Area</u>
Tract 4037.02		
Block Group 200		
Block 206	58	
Block 213	0	
Block 224	0	
Block 234*	49	
Block 235	49	
Tract Total	<u>156</u>	86.67
Total Study Area	180	100.00%
% of Twp. Pop.		4.19%

* NOTE: Block 234 encompasses a very large area, most of which is outside of the study area. The land use map overlay in the previous section indicates that the portion of this block which lies in the study area does not contain any residences. Therefore, we have reason to believe that the population count in this block is actually 0.

As can be seen in the previous table, only 4.19 percent of the entire Township's population actually resides in the study area. Of the estimated 180 persons residing in the study area, 86.67 percent of these persons reside in census tract 4037.02. Given the lack of demographic data at the block level, it is impossible to further generate specific data for the area. Such information is, however, available at the tract level. Therefore, given the likelihood that Census Tract 4037.02 would be the impact area, the demographic study will focus on this tract.

Age Distribution

Tables 4, 5, and 6 illustrate the 1980 age distributions within the County, the Township, and Census Tract 4037.02. Although the Township and the tract's age distribution appear to be comparable in 1980, it is expected that by the next census in 1990, the Township and tract's population over age 65 should be higher than the County's (Note: 12.20 percent of the County's population was between the ages of 55 and 64. In contrast, the Township and the tract's percentage in this age group was over 15 percent).

TABLE 4

1980 AGE DISTRIBUTION DELAWARE COUNTY

<u>Under 5</u>	<u>5-14</u>	<u>15-24</u>	<u>25-34</u>
32,902 5.93%	75,500 13.78%	105,196 18.95%	81,794 14.74%
<u>35-44</u>	<u>45-54</u>	<u>55-64</u>	<u>65+</u>
56,400 10.16%	63,216 11.39%	67,718 12.20%	71,281 12.84%

TABLE 5

1980 AGE DISTRIBUTION TINICUM TOWNSHIP

<u>Under 5</u>	<u>5-14</u>	<u>15-24</u>	<u>25-34</u>
233 5.43%	557 12.98%	774 18.04%	593 13.82%
<u>35-44</u>	<u>45-54</u>	<u>55-64</u>	<u>65+</u>
473 11.02%	477 11.12%	644 15.01%	540 12.58%

TABLE 6

1980 AGE DISTRIBUTION CENSUS TRACT 4037.02

<u>Under 5</u>	<u>5-14</u>	<u>15-24</u>	<u>25-34</u>
125 5.38%	292 12.57%	416 17.91%	312 13.43%
<u>35-44</u>	<u>45-54</u>	<u>55-64</u>	<u>65+</u>
245 10.54%	274 11.80%	354 15.24%	305 13.13%

Median Age

In 1980, the Township as well as Tract 4037.02 had slightly higher median ages than the County (see Table 7). We expect 1990 census data to be consistent with these figures.

TABLE 7
1980 MEDIAN AGE

	<u>Years</u>
Delaware County	32.5
Tinicum Township	34.5
Census Tract 4037.02	35.9

Sex

Much the same as age distribution, the percentage of the male/female populations in the County, the Township, and the tract are relatively similar (see Table 8).

TABLE 8
1980 SEX DISTRIBUTION
(PERCENT)

	<u>Delaware County</u>	<u>Tinicum Township</u>	<u>Census Tract 4037.02</u>
Male	47.71	48.80	48.26
Female	52.29	51.20	51.71

Race

As indicated in Table 9, Tinicum Township, and specifically the study area, has a greater percentage of white population than the County average. It is interesting to note that of the 30 Township persons listed as "other," that 19 of those persons were classified as American Indians. The census statistics also indicate that 15 persons in the Township were classified as being of Spanish origin.

TABLE 9
1980 PERSONS BY RACE

	<u>% Delaware County</u>	<u>% Tinicum Township</u>	<u>% Census Tract 4037.02</u>	<u>Study Area</u>
White	89.81	99.02	98.70	100.00
Black	9.01	.28	.30	.00
Other	1.18	.70	.99	.00

Households

The 1980 Census reports that Tinicum Township had 1,581 households with an average of 2.71 persons per household. The number of persons per household in Census Tract 4037.02 was 2.69. Both of these figures are comparable to the County's average persons per household of 2.80.

Education

There is a significant difference between Tinicum Township and the County in terms of educational level achieved for persons over age 25 (see Table 10).

TABLE 10

EDUCATION

	<u>% High School Grads</u>	<u>% 4 or More Yrs. College</u>
Delaware County	72.3	18.9
Tinicum Township	50.0	4.3
Census Tract 4037.02	50.4	5.3

Several factors may account for the differences in educational levels shown in the above table. The most significant of these factors may be the number of Township residents who were, or still are, employed in the blue collar sector. Most of these jobs do not, or did not previously, require high school or college educations. Therefore, those persons with blue collar skills may have moved into the Township for the purpose of employment or, if they were already residents, the occupations selected by these persons may have been based on the jobs available in the area. Unfortunately the Census Bureau's educational statistics do not take into account those persons who may have undertaken the several years of specialized training often necessary to obtain jobs in this sector (e.g. plumbing, welding, etc.). Therefore, the data listed above may (in part) account for the following income and employment discrepancies between the Township and the County.

Income

In 1980, Tinicum Township's residents had significantly lower per capita and median family incomes than the County average (see Table 11).

TABLE 11

1980 INCOME

	<u>Delaware County</u>	<u>Tinicum Township</u>	<u>Census Tract 4037.02</u>
Per Capita Income	\$ 8,045	\$ 6,724	\$ 6,866
Median Family Income	23,105	20,208	20,111

Based on the dollar figures listed above, the Township's figures for 1980 are 16.42 percent lower in terms of per capita income and 12.54 percent lower in terms of median family income than the County. Some of these differences may be accounted for in terms of lowered educational level and a loss of Township jobs during the late 1970's.

Employment

As seen in Table 12, 6.3 percent of the Township's civilian labor force was unemployed in 1980. This figure is only slightly higher than the Countywide unemployment figure of 5.9 percent.

TABLE 12

1980 CIVILIAN LABOR FORCE

	<u>Delaware County</u>	<u>Tinicum Township</u>	<u>Census Tract 4037.02</u>
Civilian Labor Force	262,618	1,999	1,115
Employed	247,016	1,873	1,044
Unemployed	15,602	126	71
Percent Unemployed	5.9	6.3	6.4

The 1980 census data indicates that there are significant occupational differences between the County and the Township/tract (see Table 13). Over 40 percent of the Township's work force was employed in the blue collar sector versus 26.38 percent throughout the County. In addition, only 58.63 percent of the Township's work force was employed in typical white collar occupations versus 73.05 percent Countywide.

TABLE 13

	<u>1980 EMPLOYMENT County</u>		<u>Township</u>		<u>Tract</u>	
	#	%	#	%	#	%
Managerial and professional specialty occupations	64,639	26.17	171	9.14	107	10.25
Technical sales, and administrative support occupations	86,994	35.22	535	28.56	297	28.45
Service occupations	28,794	11.66	392	20.93	210	20.11
Farming, forestry, and fishing occupations	1,417	.57	16	.85	9	.86
Precision production, craft and repair occupations	32,762	13.26	346	18.47	198	18.97
Operators, fabricators and laborers	32,410	13.12	413	22.05	223	21.36

TOTAL

247,016 100.00 1,873 100.00 1,044 100.00

It is interesting to note that while approximately 15 percent of the County's residents worked within the resident municipality, 45 percent of Tinicum Township's residents worked within the municipality.

Census Update

1970 to 1980 Background

Over the past twenty years Tinicum Township has undergone a series of significant demographic and economic changes. According to U.S. Census Bureau statistics, Tinicum Township had a resident population of 4,906 persons in 1970. At that time, the civilian labor force was comprised of 2,045 persons, only 2.1 percent of which were unemployed. By 1980, the Township's population had dropped by 12.54 percent to 4,291 persons. The civilian labor force was at 1,999, with 6.3 percent unemployment. As seen in Table 14, similar changes in population and employment (indicative of industry's move to the sunbelt and the general state of the economy) took place Countywide.

TABLE 14
POPULATION AND EMPLOYMENT 1970-1980

	<u>Delaware County</u>			<u>Tinicum Township</u>		
	1970	1980	% Change	1970	1980	% Change
Population	600,035	555,007	- 7.5	4,906	4,291	- 12.5
Civilian	245,437	262,618	7.0	2,045	1,999	- 2.2
Labor Force						
Unemployed	6,813	15,602	129.0	43	126	193.0
Percent	2.7	5.9		2.1	6.3	
Unemployed						

During the period between 1970 and 1980, both County and Township per capita and median family incomes nearly doubled. This rise in incomes was consistent with the general costs of living and inflational increases which took place throughout the region.

Other general characteristics of the Township's population (ie., age, sex, race, population density, etc.) did not change significantly between 1970 and 1980.

1980 to Present

During the early 1980's, Township as well as County economic conditions continued to decline as more and more industries closed their doors. During the mid-1980's, Tinicum Township was particularly hard hit when Westing-

house's Lester plant closed, taking with it thousands of jobs and leaving many of the Township's residents unemployed.

In recent years, however, it appears that the downward economic trend exhibited previously has begun to reverse itself. The County as well as the Township are coming back. Tinicum Township is feeling this resurgence with the construction of new offices near the airport and the redevelopment of the former Westinghouse site. New hotels have been built in the eastern portion of the Township, and UPS has located its new shipping headquarters at the western end of the Township. This has resulted in a significant change in the Township's land use pattern in terms of conversion of undeveloped land area to other, more intensive land uses.

As a result of the above changes, it is believed that employment figures as well as employment characteristics have again changed significantly. This is because most of the new businesses in the Township now tend to be more service oriented (offices, hotels) and many of those previously employed in the blue collar manufacturing sector may have retired, taken jobs outside of the Township, and/or changed occupation. Although UPS does employ local residents, many of the jobs are part-time and may not serve as primary employment for the Township's residents.

Although we have no reason to believe that the general demographic composition of the Township has changed significantly since 1980, we do recognize that the population has aged by 8 years. We also have reason to believe that the Township's population may be growing. Unfortunately, the nature of conflicting population data raises the questions of how much and how fast.

The Delaware County Board of Assessment reports that there were 203 new housing starts between 1980 and 1987. When this figure is multiplied by the Census Bureau's persons per household rate of 2.71, the result indicates an increase of 550 persons during this period (this does not take into account any out-migration, demolition of existing structures, or vacancy of older structures). At the same time, birth statistics indicate that, on the average, 65 new persons were born each year between 1981 and 1988, resulting in an increase of 520 persons from births. When taken into account the 394 Township deaths which occurred during this same period¹ it would appear the the Township's population

¹ The Pennsylvania State Data Center reported 345 deaths between 1981 and 1987. The average number of deaths per year during this period was 49. Given the unavailability of 1988 data, the average of 49 deaths per year was used for 1988, bringing the total for the 1981-88 period to 394.

change as a result of births/deaths is acutally an increase in 126 persons. As can be seen by the above statistics there is an obvious discrepancy between the figures presented above.

Another major conflict in population statistics can be found between the 1986 population estimate prepared by the U.S. Census Bureau and the Delaware Valley Regional Planning Commission's (DVRPC) recently prepared 1990 population projection. The Census Bureau's 1986 Township population estimate of 4,840 (indicating an increase of 549 persons since 1980), is far different from the DVRPC 1990 population forecast of 4,270 persons (a 21 person decrease in population). In both cases, the Planning Department has reason to question the population data.

For as much as the Planning Department tends to agree with the Countywide 1986 population estimate produced by the Census Bureau (560,600) and the 1990 DVRPC population forecast (565,440), we do not believe that these agencies are equipped to distribute these populations in an equitable manner throughout the County's 49 municipalities. Therefore, the Census Bureau's estimate appears to be high while the DVRPC forecast appears to be low. It is uncertain whether or not the questions pertaining to these figures will ever be resolved before the upcoming 1990 Census.

Summary

Over the past several years Tinicum Township has undergone a number of significant economic changes. Although the most recent of these changes has been in a positive direction, it is unlikely that enough time has elapsed to significantly alter the general demographic characteristics of the Township's population. Therefore, for the purpose of this study, it is reasonable to assume that the character of the majority of the study area's population is consistent with what was reported for the 1980 Census.

Almost any type of new development along the Township's waterfront could reasonably be expected to significantly change the character of the study area and its surrounding neighborhoods. Although more intensive residential and commercial development would help to support the Township's tax base, it is highly unlikely that such development would provide a significant number of jobs to neighborhood residents. Given the small-town, blue-collar nature of the study area's population, care must be taken to ensure that any future development is sensitive to the needs and desires of existing residents and does not significantly alter neighborhood character or serve to displace the population that remains in this area.

SECTION III

HISTORIC RESOURCES

Tinicum Township has a number of historically significant sites within its boundaries, some of the most important of which are located on the study area's waterfront parcels (see Figure 1). The Historic Section of the Planning Department believes that these sites provide an eminently reusable cultural resource which could serve to enhance the overall value of future developments in the study area. Due to the historic value of these sites to the Township (and the County), any proposed scenarios for waterfront development in the study area should take into consideration their historic integrity.

The information contained in the following table pertains to the historic sites mapped in Figure 1. This information has been extracted from a previously prepared Coastal Zone Management Program Study entitled "Resource Protection Plan-Pennsylvania/Delaware River Coastal Zone" (1981).

TABLE 1

TINICUM TOWNSHIP HISTORIC SITES

Prehistoric Archeological Sites

A. Resource Name:	Reported Indian Site
Study Unit:	Unknown
Municipality:	Tinicum Township (Essington)
Source:	Becker (1977)
Description:	Archaeological excavation at the historic site of Printzhof recovered a small number of prehistoric artifacts.

Historic Archeological Sites

B. Resource Name:	Site of Revolutionary War Scuttle (1777)
Study Unit:	Public institution
Municipality:	Tinicum Township
Source:	Delaware County Planning Department; also documented by two historic maps
Description:	Commodore Hazleton's gunboats were scuttled in the Delaware River near the mouth of Darby

FIGURE 1

HISTORIC SITES

Source: DCPD, 1989

FIGURE 1

HISTORIC SITES

Source: DCPD, 1989

FIGURE 1

HISTORIC SITES

Source: DCPD, 1989

TABLE 1

TINICUM TOWNSHIP HISTORIC SITES
(CONTINUED)

	Creek and in the vicinity of Hog Island. Some ships were wrecked and sunk.
C. Resource Name:	Printzhof (17th century)
Study Unit:	Residences and public institutions
Municipality:	Tinicum Township (Essington)
Source:	Becker (1977)
Description:	Site of a complex of buildings and earthworks constructed by Swedish governor Johan Printz in 1643. Archaeological excavations by Donald Cadzow in 1937 revealed foundations and features and recovered artifacts, but field notes were lost and data never published. Further excavations are described by Becker (1977).
D. Resource Name:	Springhouse (probably 17th century)
Study Unit:	Residences (outbuilding)
Municipality:	Tinicum Township (Essington)
Source:	Delaware County Planning Department
Description:	The structure is reputed to be of Swedish origin and associated with the original Swedish village next to Printzhof. It suggests the possibility of more extensive subsurface archaeological remains associated with Printzhof.
<u>Historic Sites</u>	
1. Resource Name:	Corinthian Yacht Club
Property Class Type:	Clubhouse

TABLE 1

TINICUM TOWNSHIP HISTORIC SITES
(CONTINUED)

Study Unit(s):	Private institution
Municipality/Neighborhood:	Tinicum Township
Street Address/ Location:	2nd Street at Delaware River
Source/Status:	DVRPC, DC
Comments:	c. 1763, 1892. Originally site of Fort Gottenburg in 1656. John Hart purchased and constructed the Rosedale Inn in 1763, which is center part of present building (DC). Appears to be eligible for the National Register.
2. Resource Name:	The Printzhof (Governor Printz State Park)
Property Class Type:	Park
Study Unit(s):	Public institution
Municipality/Neighborhood:	Tinicum Township
Street Address/ Location:	2nd Street & Taylor Ave., at River
Source/Status:	NR, NHL, PI, DC, WPA
Comments:	c. 1643. Site of first permanent white settlement in Pennsylvania. Excavations have uncovered the foundations of Governor Johan Printz's house. Now a park operated by PHMC. (DC, PI) [added to map by DCPD staff]
3. Resource Name:	The Lazaretto
Property Class Type:	Former hospital
Study Unit(s):	Public institution
Municipality/Neighborhood:	Tinicum Township

TABLE 1
TINICUM TOWNSHIP HISTORIC SITES
(CONTINUED)

Street Address/ Location:	2nd Street & Wanamaker Avenue
Source/Status:	NR, HABS, PI, DC, WPA
Comments:	c. 1800. The state legislature created a Board of Health to operate the Lazaretto, a quarantine station. Moved to Marcus Hook in 1880 when Federal government took over. Later used by Philadelphia Athletic Club as a pleasure resort until 1913. Operated as a seaplane base since. (NR)
4. Resource Name:	Tinicum Inn
Property Class Type:	Bar, restaurant
Study Unit(s):	Public accommodation
Municipality/Neighborhood:	Tinicum Township
Street Address/ Location:	Carre Ave. & 2nd Street, SW corner
Source/Status:	WPA
Comments:	Original hotel built in 1884. Destroyed by fire and rebuilt in 1927. (WPA)
5. Resource Name:	Episcopal Church
Property Class Type:	Church
Study Unit(s):	Private institution
Municipality/Neighborhood:	Tinicum Township
Street Address/ Location:	3rd Street & Wanamaker Ave., NW corner
Source/Status:	WPA
Comments:	c. 1892. Wooden structure built by Mrs. Box in 1892. Stone

TABLE 1

TINICUM TOWNSHIP HISTORIC SITES
(CONTINUED)

church erected in 1929 and wooden structure moved to the side. (WPA)

6. Resource Name: Riverside Hotel (Walber's)

Property Class Type: Restaurant

Study Unit(s): Public accommodation

Municipality/Neighborhood: Tinicum Township

Street Address/Location: Taylor Ave. at Delaware River

Source/Status: WPA

Comments: c. 1864 (WPA). The original structure has been almost completely obscured by subsequent additions and alterations.

SOURCE: Resource Protection Plan - Pennsylvania/Delaware River Coastal Zone, 1981.

The following abbreviations are used:

NR = National Register
 NHL = National Historic Landmark
 NEL = National Engineering Landmark
 HABS = Historic American Building Survey
 HAER = Historic American Engineering Record

PI = Pennsylvania Inventory
 PS = Pennsylvania Historic Resource Survey
 PHMC = Pennsylvania Historic and Museum Commission Marker
 DVRPC = Delaware Valley Regional Planning Commission
 BCR = Bucks County Conservancy Register of Historic Places

WPA = Works Project Administration, 1936 Survey (Delaware County only)

DC = Delaware County Planning Department Files
 DSC = Delaware County Survey Checklist (preliminary to Pennsylvania Survey)

PHC = Philadelphia Historic Commission Register of Historic Places

WS = Windshield Survey, Coastal Zone Management Study

SECTION IV

NATURAL FEATURES

Introduction

Much of Tinicum Township contains environmentally sensitive areas. The majority of these areas lie along the watercourses and wetlands located in the northern, western and southern portions of the Township. The major subjects of concern in these areas are floodplains, wetlands and wet soils.

Floodplains

As can be seen in Figure 1, much of Tinicum Township is located in the 100-year floodplain. Aside from the specific regulatory issues relating to floodplains (which will be addressed in the Action Plan), the major considerations when proposing new development (or expanding old development) in the 100-year floodplain are human safety and property damage. The best way to ensure such protection is through strict adherence to federal, state and local floodplain regulations which relate to the siting and floodproofing of structures and other encroachments in these areas.

Wet Soils

When evaluating a parcel of land for development, great consideration is given to the characteristics of the underlying soils. This can be important because the underlying soils provide a good indication of the site's capabilities for development. One of the most important soil considerations is its wetness. This is because wet soils can pose problems for on-site sewer systems and can contribute to the likelihood of wet basements and foundations. Soil stability is also a consideration.

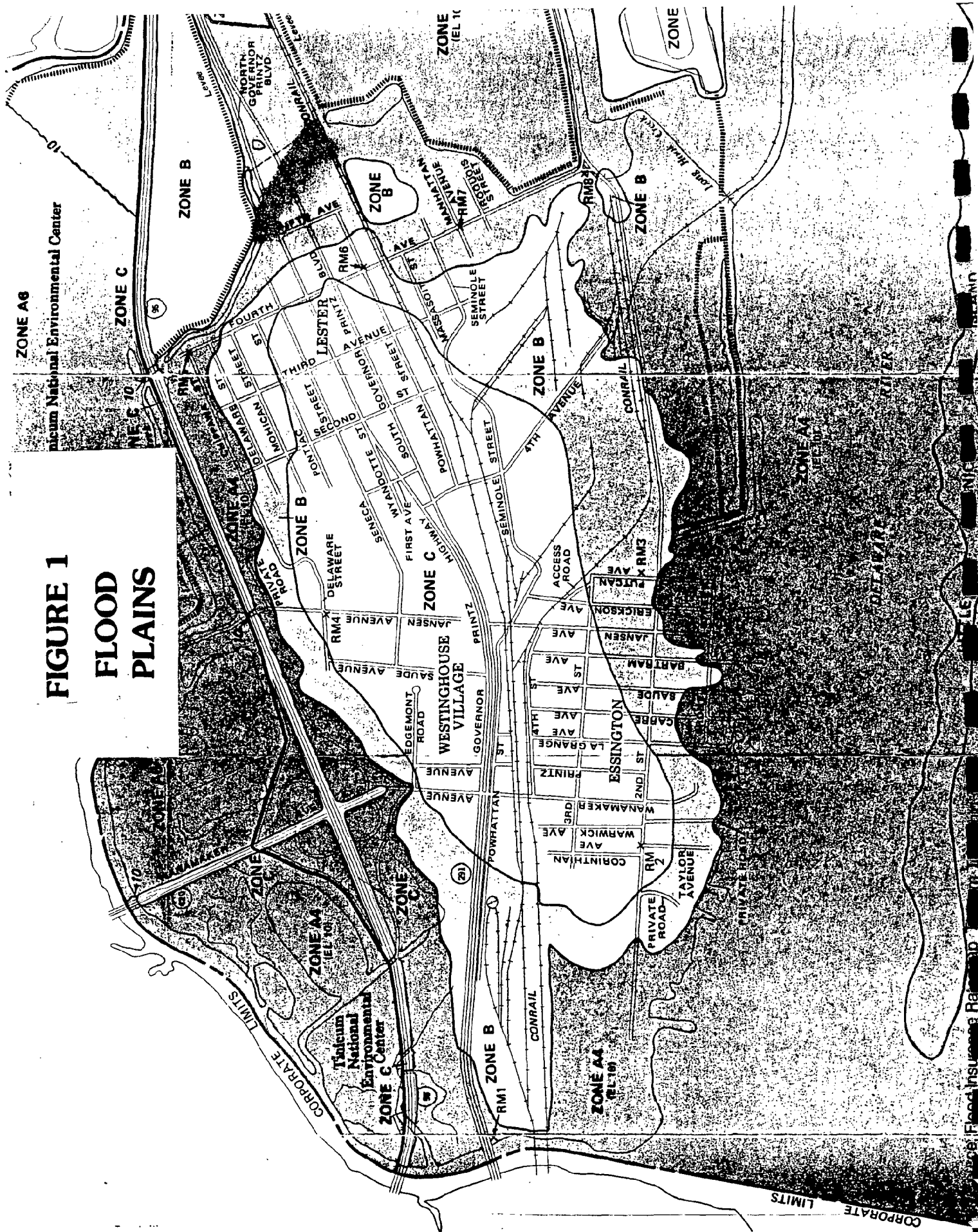
Tinicum Township lies within an area known as the coastal plain. According to the Soil Survey for Chester and Delaware Counties,¹ coastal plain soils are generally comprised of unconsolidated gravel, silt, sand and other sediments. As Figure 2 illustrates, Tinicum Township's land area is comprised of two basic soil types, both of which are typically found in Delaware County's coastal plain. These soils are Tm (Tidal marsh) and Ma (Made land, gravelly materials).

Tm soil is generally very poor for development due to its shallow depth to the high water table (0 feet) and its subjectivity to tidal overflow. According to the Soil Sur-

¹ Soil Survey Chester and Delaware Counties, Pennsylvania, U.S. Department of Agriculture, Soil Conservation Service, May 1963.

FIGURE 1

**FLOOD
PLAINS**



vey, Tm soil is classified under Building Group 13. Soils in this group are considered "unsuitable as sites for homes or other buildings" but "may have value as parks and recreation areas." Tm soil is classified as a hydric soil and is therefore a "red-flag" wetland soil.

Ma soil is essentially man made soil and its characteristics can vary depending on its location and age. The Soil Survey indicates that Ma soil has a depth to the seasonally high water table of 3+ feet and a depth to bedrock of 4+ feet, but given the fact that much of the Township was at one time tidal marsh (filled to create buildable land), development along the Township's shorelines should take into account the potentially wet nature of the Ma soil in this area.

Wetlands

The federal Clean Water Act defines wetlands as:

"Those areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted to life in saturated soil conditions, including swamps, marshes, bogs, and similar areas."

Wetlands are considered some of the most valuable and most ecologically sensitive resource areas. This is due to the variety of terrestrial and ecological functions which they perform. One of the most important of these functions is the stabilization of the water regime. Wetlands have the capacity to store large quantities of floodwater, acting as a sponge to help regulate stormwater runoff and minimize the potential for downstream flooding. During dry periods, stored water is slowly released into the ground where it serves to replenish and stabilize the groundwater supply.

Wetlands also perform a valuable water quality function. They have the ability to trap and store suspended particles and silt transported by surface water runoff. Wetland vegetation also helps to purify contaminated water by removing and storing limited amounts of inorganic materials (such as nitrogen and phosphorous compounds) from the silt and using them as plant nutrients. Thus, sediments and impurities are filtered out of the water.

Another important function of a wetland is that of a wildlife habitat. In terms of animal food produced per acre, wetlands, and in particular, tidal marshes, are among the most productive ecosystems on earth. As a result, they serve as habitats for both common and endangered species. A number of such common and endangered species of plant and

wildlife have been identified in the Tinicum area. Aesthetically, wetlands are often pleasing to look at, and when inhabited by stationary or migratory wildlife, as in the case of the Tinicum National Environmental Center, can serve as important nature preserves.

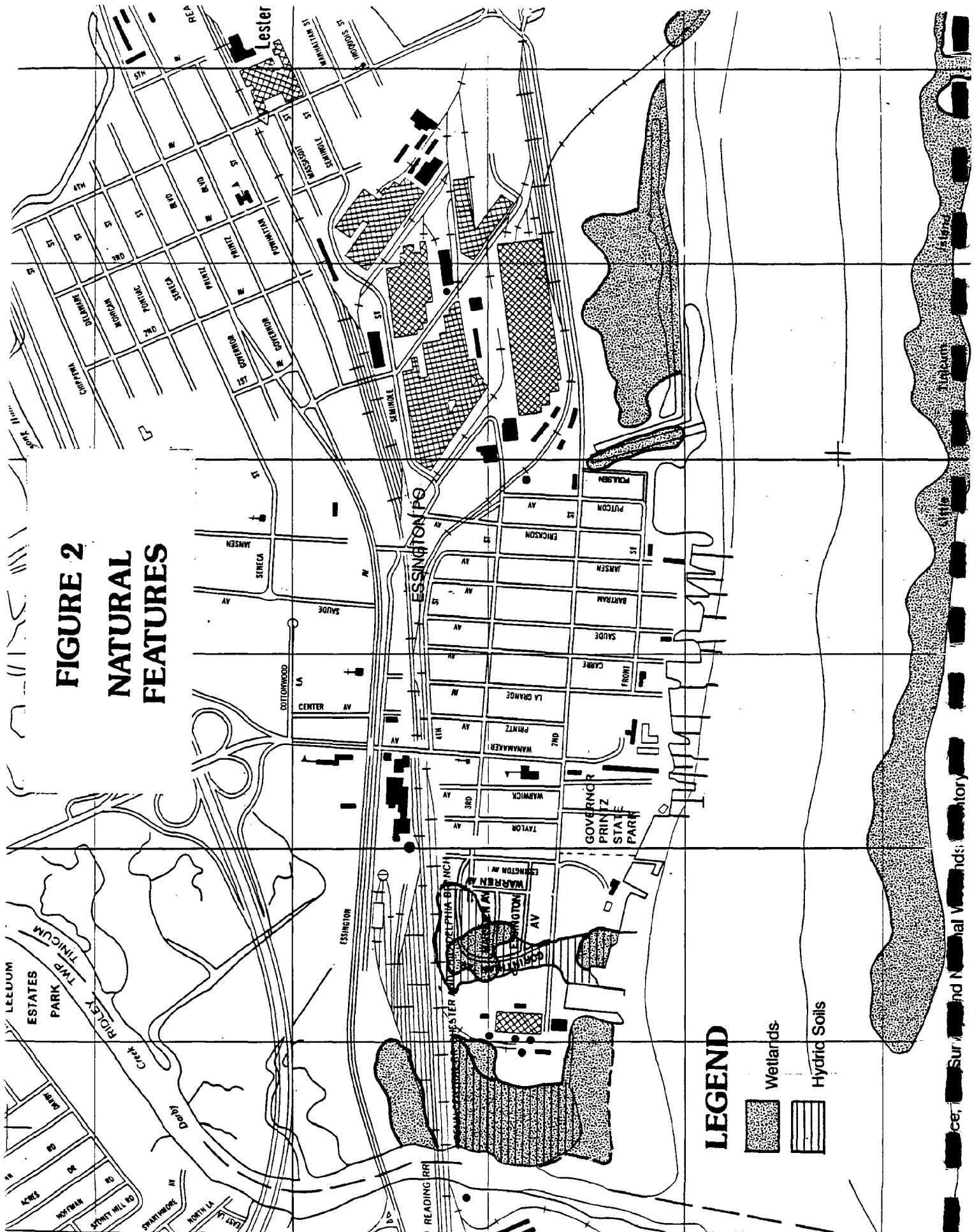
It is for the above reasons that wetlands can pose both building (due to wetness) and regulatory (due to the need to protect the resource) constraints. Even though wetland development is discouraged by regulatory agencies, this is not to say that development in or around wetlands is impossible. Rather, these agencies have something to say about the degree to and way in which wetlands are developed (if at all) through their respective permitting programs. Approval for these agency permits will be based on a number of factors which may range from the nature of the proposed impact (and proposed mitigation measures) to the environmental damage versus the social and economic benefits related to the proposed activity. Wetlands permitting will be discussed in greater detail in the Action Plan section on regulatory processes.

Wetlands are identified and delineated using what is known as the "three-parameter" approach. This approach, which was developed jointly by the Environmental Protection Agency, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the Soil Conservation Service, is used by all regulatory agencies, including the Pennsylvania Department of Environmental Resources. The three parameters examined when making a wetlands determination or delineation are the predominance of wetland vegetation, the presence of hydric soils, and soil hydrology. (For more information, refer to the Federal Manual for Identifying and Delineating Jurisdictional Wetlands²).

The most readily available sources of information for the layman to "red flag" a potential wetland are the National Wetlands Inventory (NWI), prepared by the U.S. Fish and Wildlife Service, the Soil Survey for Chester and Delaware Counties, and recent aerial photographs. Both the NWI and the Soil Survey are readily available, but because many wetland areas do not appear on the NWI (also the boundaries are not exact) and the soils may be wetter than the Soil Survey would indicate, each parcel being considered for development should be evaluated by a wetlands expert to determine if wetland vegetation is present and if a wetland still exists.

² Federal Interagency Committee for Wetland Delineation. 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands. U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S.D.A. Soil Conservation Service, Washington, D.C. Cooperative technical publication.

Figure 2 indicates "red flag" wetland areas along Tinicum Township's waterfront. In the case of the Figure 2 Natural Features map, the Tm soils are indicative of hydric (wetland) conditions. As previously stated, a soil type such as Ma does not rule out the possibility that a wetland still exists. The wetlands information shown on Figure 2 has been taken from the NWI and areas shown as wetlands will be considered such by the regulatory agencies. The exact boundaries of such areas will need to be delineated prior to development. Please note that areas in or immediately adjacent to Darby Creek and the Delaware River are also considered wetlands.



SECTION V

INFRASTRUCTURE AND PUBLIC SERVICES

Public Utilities/Services

Tinicum Township is served by public water service provided by the Philadelphia Suburban Water Company. Sanitary sewage disposal is provided by the Tinicum Township Sewage Authority which serves the entire Township with the exception of the airport and several large industries in the eastern portion of the municipality (served by the Philadelphia Water Department - operated by Southwest Philadelphia Sewage Treatment Plant). Electric and gas service is provided by the Philadelphia Electric Company. Telephone service is provided by Bell of Pennsylvania.

Residential solid waste collection is performed by Township crews which are paid for out of the municipal budget. The collected refuse is taken to the County's transfer station in Chester Township. After being loaded onto large tractor trailers at the transfer station, the refuse is then transported to the County-owned Colebrookdale Landfill in Berks County, Pennsylvania for ultimate disposal. Commercial and industrial wastes, as well as those generated at some multiple unit apartment buildings, are collected by private haulers and disposed of in the same manner as Township-collected residential waste.

Given the fact that the Township is fully served by public utilities, almost any type of development proposed for the study area could be served by the previously mentioned services.

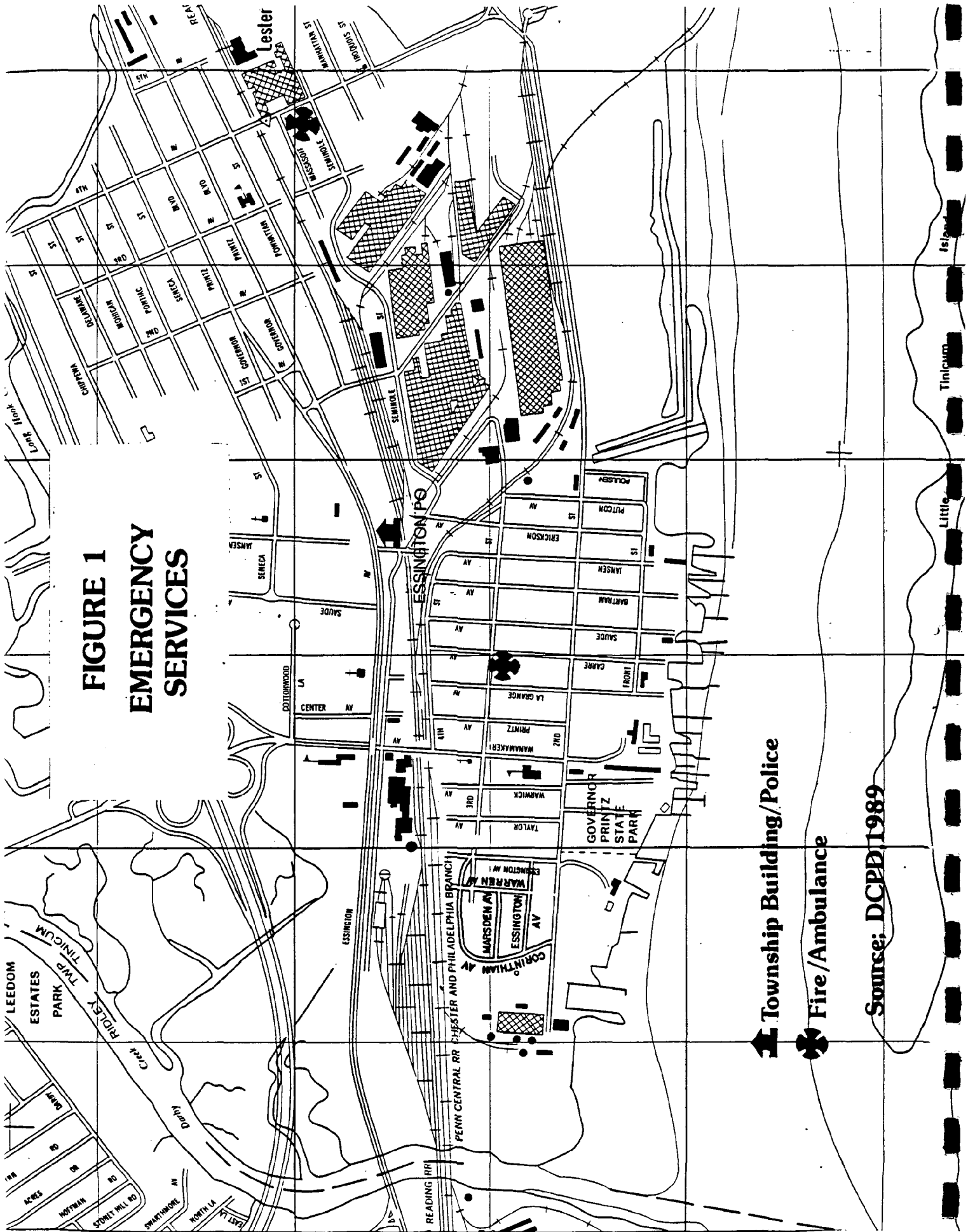
Emergency Services

Police

Tinicum Township has nine sworn police officers. These officers are responsible for patrolling the entire Township, including Interstate 95 (where the Township Police are backed up by the State Police). Although the City of Philadelphia patrols the airport area (including portions of Tinicum Township), arrests made on Township property are processed by the Township Police. The greatest crime problem in the Township is in the area of stolen and vandalized automobiles and boats (handled by the Fish Commission).

Fire/Ambulance

Tinicum Township has two fire/ambulance services, both of which are staffed by volunteers. One fire/ambulance service is located in the portion of the Township known as Lester; the other is located in the portion of the Township



known as Essington (see Figure 1). In addition, the ambulance staff works in conjunction with a paid paramedic stationed at the Township Municipal Building. This paramedic is supplied by Crozer-Chester Medical Center. Each of these services has two pumper trucks, a rescue vehicle, and an ambulance.

The Township fire/ambulance companies report that they respond to a total of approximately 350 to 400 fire calls per year and an estimated 1,475 emergency ambulance calls per year (approximately 900 of which are located in Prospect Park and Ridley Park Boroughs). Most of these calls involved accidents, brush fires and water rescues.

Water Rescue

The Township fire/ambulance companies are responsible for water rescue in the Township portion of the Delaware River. Each fire/ambulance company has a fire/rescue boat (Essington - 24 feet and Lester - 20 feet), both of which are kept at the Anchorage Yacht Club. In addition to these two boats, another 14 foot rescue boat is kept on a trailer to serve as back-up. In addition to the Township rescue services, water patrol and rescue is also performed by a staff member from the Fish Commission and by the Coast Guard.

Emergency Service Evaluation

Although existing emergency services appear to be adequate to accommodate existing levels of Township activity, an increased number of residents and visitors to the Township and its waterfront may place a greater demand on the local services than they were designed for. In particular, both police and water-based patrol and rescue services should be evaluated to ensure adequate protection in the event of increased tourism in the area.

Transportation

Philadelphia International Airport

Much of Philadelphia International Airport's land area is located in Tinicum Township. With the recent introduction of a number of motels in the western portion of the Township, this area receives a number of overnight visitors using the airport.

Highways

Tinicum Township is traversed by three major highways; Route 420 runs north/south along Wanamaker Avenue, Route 291 runs east/west along Governor Printz Boulevard (also known as Essington Avenue and the Industrial Highway), and Interstate 95 (a limited access north/south highway) runs

along the northern border of the Township. Although the Township has only one interchange with I-95 (at Route 420), there is access from I-95 directly into the Philadelphia International Airport.

Tables 1 through 5 provide available traffic counts in the vicinity of the intersection of Routes 420, 291, and I-95.

TABLE 1

TOTAL TRAFFIC COUNTS

PA 291 between I-95/Governor Printz Boulevard

1985 - 10,541 AADT

NOTE: this ramp, which was located at the eastern end of the Township, is now closed - with the opening of I-95, the count for Rt. 291 may now be lower.

PA 420 between I-95/PA 291 (Governor Printz Boulevard)

1987 - 16,331 AADT

1986 - 25,067 AADT

I-95 between PA 291/PA 420¹

1983 - 57,974 AADT

AADT - average annual daily traffic

Source: Delaware Valley Regional Planning Commission

Public Transit

There is only one public transit route which operates in Tinicum Township; it is the Route 37 bus service (see Figure 2). This transit route runs along Route 291 from Chester City, through Tinicum Township, and terminates at Broad and Snyder in the City of Philadelphia. This route serves a number of major employers along Route 291 as well as the airport. The approximate length of time for the ride from the intersection of Routes 420 and 291 to the airport is eight minutes. Although the bus is scheduled to run approximately every 35 minutes during peak hours, the bus runs only once an hour during off-peak hours. It should be

¹ The last traffic count taken in Tinicum Township was in 1983, before the completion of I-95. The most recent traffic count since the highway was completed was performed in 1986 at the intersection of I-95 and Stewart Avenue. A traffic count at this exit, which is approximately $\frac{1}{2}$ mile west of Tinicum Township, indicated an AADT of 89,421.

DATE 7/27/80
TIME 15:09:48

LAW/AL REG PLNG ISS
HIGHWAY NETWORK COVERAGE TRAFFIC COUNT

P 13

CO. DELAWARE

195

MUN. TINCUM

BET. TR 420

AND 195 NB OFF RAMP

MAP 1090000000000000

INDEX

TRAFFIC PATTERN: PA. 1
L.R.

TABLE 2

DIRECTION FLOW: BOTH

DIRECTION COUNTED: NORTH

HOUR ENDING MON. TUES. WED. THURS. FRI. SAT. SUN.
4/30F 5/ 1F 5/ 2F

1AM
2AM
3AM
4AM
5AM
6AM
7AM
8AM
9AM
10AM
11AM
12PM
1PM
2PM
3PM
4PM
5PM
6PM
7PM
8PM
9PM
10PM
11PM
12AM

634 602
432 367
358 314
376 339
514 485
1113 1132
3411 3234
4579 4467
3814 3762
2506
2146 2110
2043 2071
2062 2106
2117 2152
2392 2345
2885 2813
2781 2766
2708 2624
2567 2031
1891 1504
1303 1300
1242 1111
1157 1068
925 896

TOTALS

28219 44634 14702

F = FAIR

S = SNOW

R = RAIN

H = HOLIDAY

E = ESTIMATED

I = INNER LANE

O = OUTER LANE

1986 AADT 40170
AADT EXPANSION FACTOR 0.90

1986 AAWT 42848
AAWT EXPANSION FACTOR 0.96

AM PEAK 2 10.26 HOUR ENDING 8AM
PM PEAK 2 6.30 HOUR ENDING 4PM

DATE 04/14/87
TIME 13:53:21

DELAWARE VALLEY REGIONAL PLANNING COMMISSION
HIGHWAY NETWORK COVERAGE TRAFFIC COUNT

PAGE 8

CO. DELAWARE

TR 420

TABLE 3

MUN. TINICUM

BET. TR 291

AND I 95

MAP 10920057022040

INDEX

TRAFFIC PATTERN: PA.
L.R.

DIRECTION FLOW: BOTH

DIRECTION COUNTED: SOUTH

HOUR ENDING	MON. 1/ 5F	TUES. 1/ 6F	WED. 1/ 7F	THURS.	FRI.	SAT.	SUN.
-------------	---------------	----------------	---------------	--------	------	------	------

1AM		113	115				
2AM		53	53				
3AM		33	45				
4AM		17	30				
5AM		57	49				
6AM		141	160				
7AM		545	579				
8AM		553	601				
9AM		522	533				
10AM	426	405					
11AM	417	392					
12PM	458	474					
1PM	507	523					
2PM	444	489					
3PM	556	544					
4PM	528	576					
5PM	541	609					
6PM	537	552					
7PM	420	405					
8PM	362	375					
9PM	290	310					
10PM	297	274					
11PM	191	238					
12AM	174	177					

TOTALS 6148 8377 2165

F = FAIR

S = SNOW

R = RAIN

H = HOLIDAY

E = ESTIMATED

I = INNER LANE

O = OUTER LANE

1987 AADT 8041
AADT EXPANSION FACTOR 0.96

1987 AAWT 8628
AAWT EXPANSION FACTOR 1.03

AM PEAK 3 6.60 HOUR ENDING 8AM
PM PEAK 3 7.27 HOUR ENDING 5PM

DATE 11/4/11
TIME 13:53:21

US ARK LEX ION LAN CUL D ION
HIGHWAY NETWORK COVERAGE TRAFFIC COUNT

AGE

TABLE 4

CO. DELAWARE

TR 420 WANAMAKER AVE

MUN. INNICUM.

BET. TR 291

AND I 95

MAP 10910057022040

INDEX

TRAFFIC PATTERN: PA. 1

L.R. 0420

DIRECTION FLOW: BOTH

DIRECTION COUNTED: NORTH

HOUR ENDING

MON. TUES. WED. THURS. FRI. SAT. SUN.
1/ 5F 1/ 6F 1/ 7F

1AM	144	143				
2AM	66	62				
3AM	45	49				
4AM	24	35				
5AM	45	48				
6AM	92	83				
7AM	292	322				
8AM	528	544				
9AM	468	461				
10AM	422	440				
11AM	417	429				
12PM	542	485				
1PM	505	476				
2PM	488	512				
3PM	514	514				
4PM	725	738				
5PM	674	801				
6PM	619	631				
7PM	462	498				
8PM	356	403				
9PM	279	302				
10PM	272	244				
11PM	218	239				
12AM	191	220				
TOTALS	6684	8636	2086			

F = FAIR

S = SNOW

R = RAIN

H = HOLIDAY

E = ESTIMATED

I = INNER LANE

O = OUTER LANE

1987 AADT 8290
AADT EXPANSION FACTOR 0.96

1987 AAWT 8895
AAWT EXPANSION FACTOR 1.03

AM PEAK % 6.11 HOUR ENDING 8AM
PM PEAK % 9.28 HOUR ENDING 5PM

DATE 07/24/86
TIME 15:09:48

DELAWARE VALLEY REGIONAL PLANNING COMMISSION
HIGHWAY NETWORK COVERAGE TRAFFIC COUNT

PAGE 14

CO. DELAWARE

195

MUN. TINCUM

BET. TR 420

AND 195 SB ON RAMP

MAP 10900000000000

INDEX

TRAFFIC PATTERN: PA- 1

DIRECTION FLOW:BOTH

DIRECTION COUNTED:SOUTH

HOUR ENDING

MON.

TUES.

WED.
4/30F

THURS.
5/ 1F

FRI.
5/ 2F

SAT.

SUN.

1AM
2AM
3AM
4AM
5AM
6AM
7AM
8AM
9AM
10AM
11AM
12PM
1PM
2PM
3PM
4PM
5PM
6PM
7PM
8PM
9PM
10PM
11PM
12AM

863
487
377
341
440
683
1926
2517
2338
2314
2065
2142
2196
2181
2527
3202
4168
4207
2843
2013
1615
1662
2382
1329

773
473
367
377
414
697
1914
2413
2310

TOTALS

36846 45085 9738

F = FAIR

S = SLOW

R = RAIN

H = HOLIDAY

E = ESTIMATED

I = INNER LANE

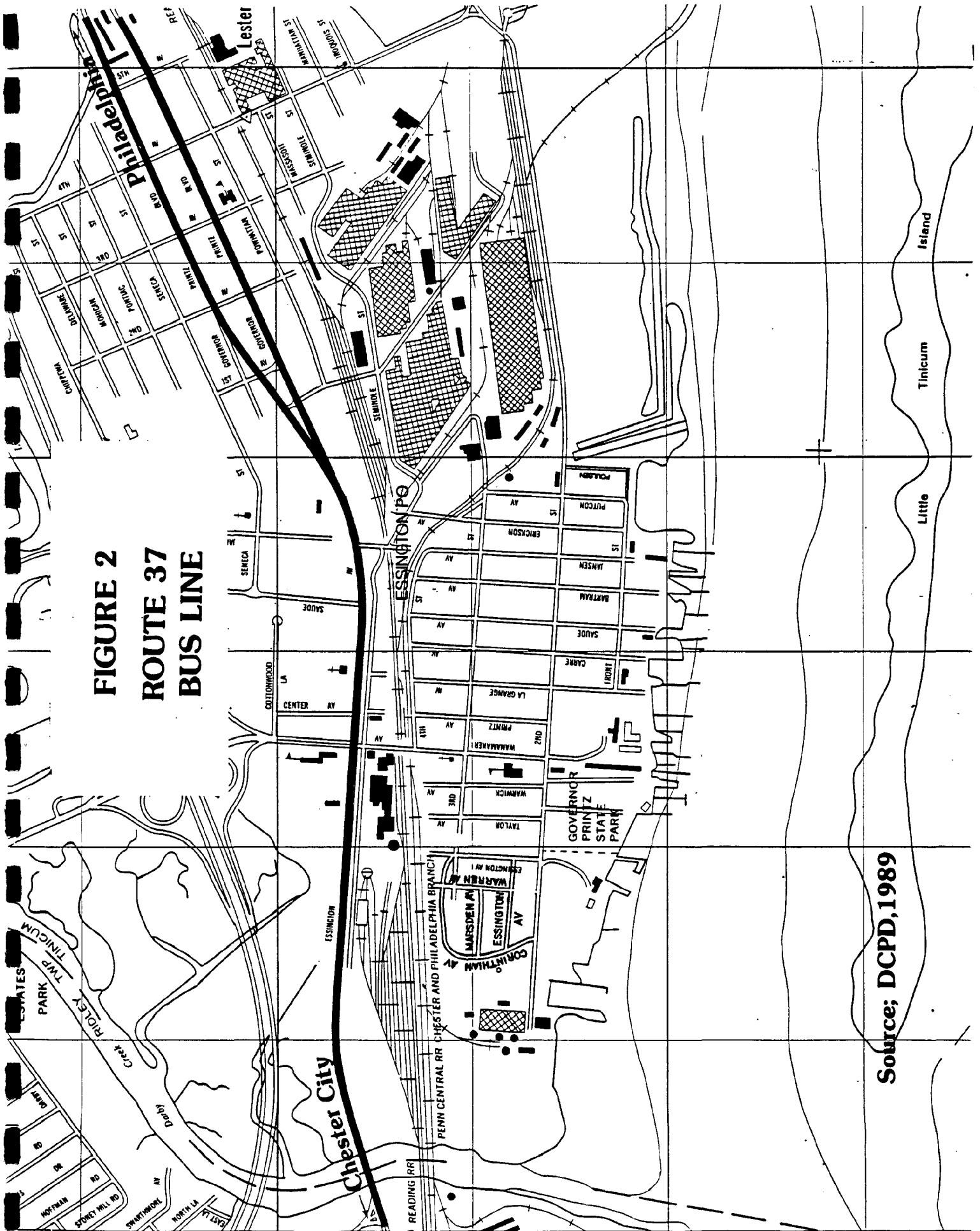
O = OUTER LANE

1986 AADT 40576
AADT EXPANSION FACTOR 0.90

1986 AAWT 43281
AAWT EXPANSION FACTOR 0.96

AM PEAK % 5.58 HOUR ENDING 8AM
PM PEAK % 9.24 HOUR ENDING 5PM

**FIGURE 2
ROUTE 37
BUS LINE**



Source; DCPD, 1989

noted that there is also an Airport High Speed Line which serves as a link between Center City and the airport. This line does not serve the Township's residents.

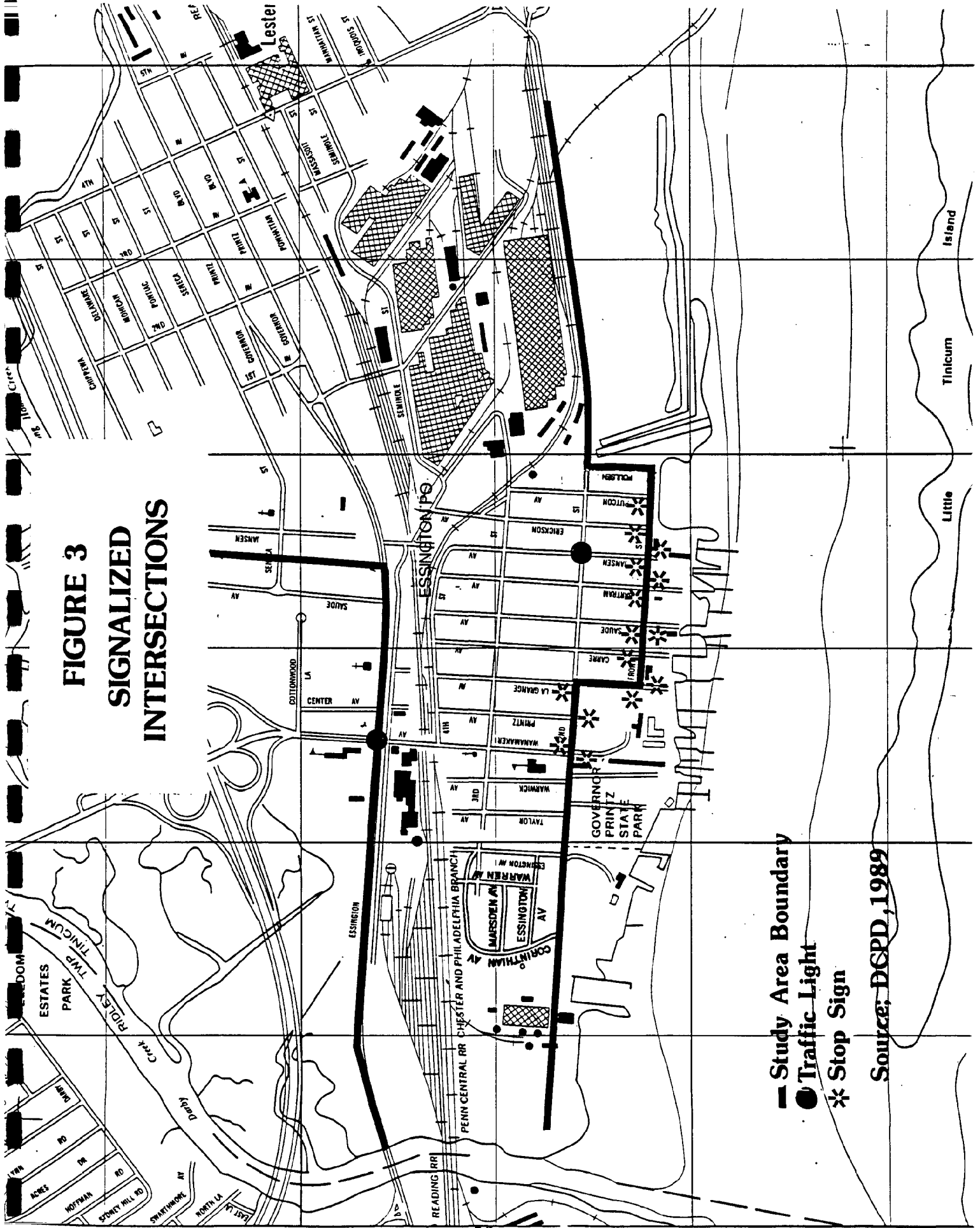
A recent report entitled "Delaware County Waterfront Communities Transit Service Improvements Study," (DCPD - June, 1988) recommended modifying the Route 37 bus line to better serve the Township's Airport Business Center located at the eastern end of the Township. Additional recommendations contained in this study are the examination of new routes to serve the UPS Air Package Sorting Center and an examination of a new bus route which would run from the town of Media, south along Route 420, and then east on the Industrial Highway to the airport. Only time will tell if a new route will be implemented.

Access to the Study Area

Tinicum Township as a whole can be easily accessed by air, highway, or public transportation. The study area, however, is not as easily accessed in this manner. The nearest public transit route is over four blocks from the waterfront. Given the current level of public transit service during off-peak hours, it is unlikely that the waterfront (if developed for recreational use) would be frequented by airport/business tourists using public transit. On the other hand, tourists or several-day visitors (staying at local motels) might use the waterfront should it be made more accessible.

Automobile access to the study area via Wanamaker Avenue is relatively easy. Unfortunately, such access is constrained by the lack of public parking in the area. The only large parking area within the study area is located at Walbers/Governor Printz Park. All other remaining parking is curbside. A major study area access problem is related to street size. Although Wanamaker Avenue and 2nd Street are classified as "feeder streets," the remaining streets in the study area were designed for residential use only and have not been designed to accommodate truck, boat, or large-volume automobile traffic. As a result, trucks are specifically prohibited from neighborhood streets (Wanamaker, Poulsen, and Jansen Avenues, and Front Street comprise the designated truck route). There are no one-way streets in the study area. Signalized intersections and stop signs are shown on Figure 3. Therefore, any future recommendations for new development, and thus an increase in local recreational/tourist/commercial traffic, should include elements which address internal street circulation (e.g. one-way streets, reduction in on-street parking, etc.) and other parking issues.

FIGURE 3 **SIGNALIZED** **INTERSECTIONS**



- Study Area Boundary
- Traffic Light
- * Stop Sign

Source: DCPD, 1989

SECTION VI

POLICY DOCUMENT INFORMATION

Comprehensive Plan

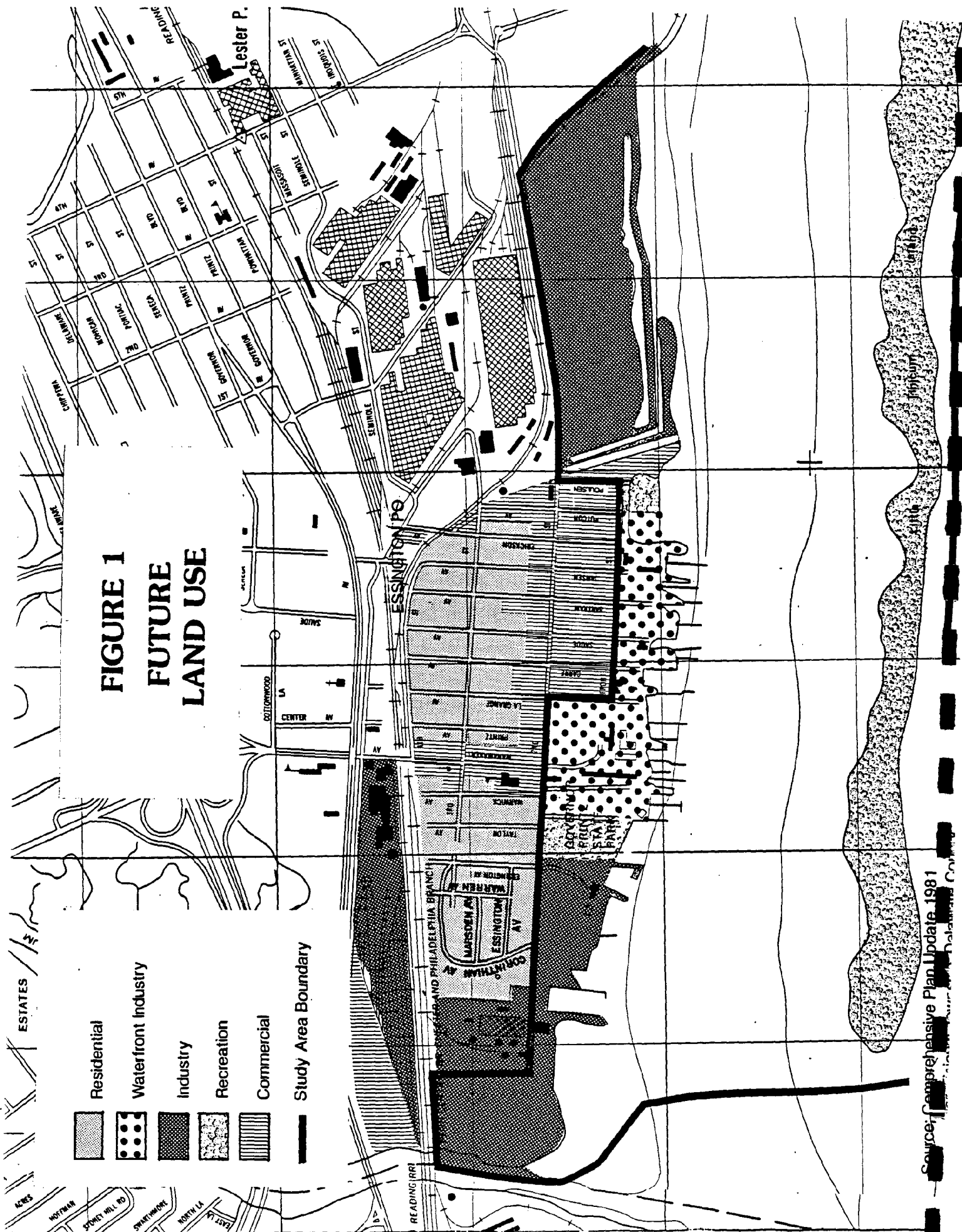
Land Use

A major land use recommendation of the Tinicum Township Comprehensive Plan (1981) is to "...replace all residential land usage south of Second Street to the waterfront in Essington [with commercial and industrial land usage]," specifically prohibiting residential land use. The main reason for this recommendation is the potential reduction of flood damage to residential dwellings. Another reason for this recommendation is to allow for "...sound planning of commercial and industrial ventures in this vicinity [which] will ultimately diminish adverse flood related damage to these properties, thus revitalizing these portions of Essington." The above recommendation is a major impetus for the preparation of this study. See Figure 1 - Future Land Use Map.

Recreation

Another major land use consideration addressed in the Township Comprehensive Plan is that of recreation. The land use plan points out that there are virtually no sites available for municipal open space/recreation facilities in the southern portions of the Township. The only existing public parkland in the vicinity of the study area is Governor Printz Park (state owned) and a 1.49 acre parcel at the former site of the Wanamaker Elementary School (Wanamaker Avenue between Second and Third Streets). The tot lot in the Governor's Landing Subdivision is for the use of residents only. One of the most important recommendations of the land use plan is the need to provide municipal emergency access to the Delaware River. This need was deemed foremost over and above recreational use access because the only emergency access to the river is presently provided by a private yacht club.

The comprehensive plan suggests two possible sites for the construction of a boat ramp. The first, at the foot of Jansen Avenue, is suitable for emergency access only due to a lack of parking for public use. The second site, located at the foot of Poulsen Avenue, could serve both public and emergency access uses. Relative to access at either site, the land use plan acknowledges the siltation problems along the back channel behind Little Tinicum Island. It should be noted in the following portions of this section on zoning that the current zoning ordinance is inconsistent with several of the open space objectives listed above. It should also be noted that the proposed zoning ordinance prepared by DCPD, although inconsistent with the desire to eliminate residential use below Second Street, does address open space and the desire for safe and unified waterfront development.



Existing Zoning

As seen in Figure 2, the majority of the study area's parcels lie in the Industrial "L" District. The Township's current zoning ordinance (1984) does not specify any particular uses which are permitted in this zoning district. Rather, the ordinance lists those uses which are prohibited in the district. Most of these uses relate to junkyards and the manufacture of a number of various substances. Only two land uses (although prohibited) are permitted by special exception. These are motels (which must comply with the regulations for motels in the Commercial District and open-lot storage, sales, or display of merchandise (provided that this storage is accessory to a use within an enclosed building). In view of the lack of specific permitted land uses in the Industrial "L" District, it would appear that any land uses other than those strictly prohibited by ordinance may be permitted in this district. It should be noted that the regulations for this district address industrial uses only and do not specify the requirements for any other land use.

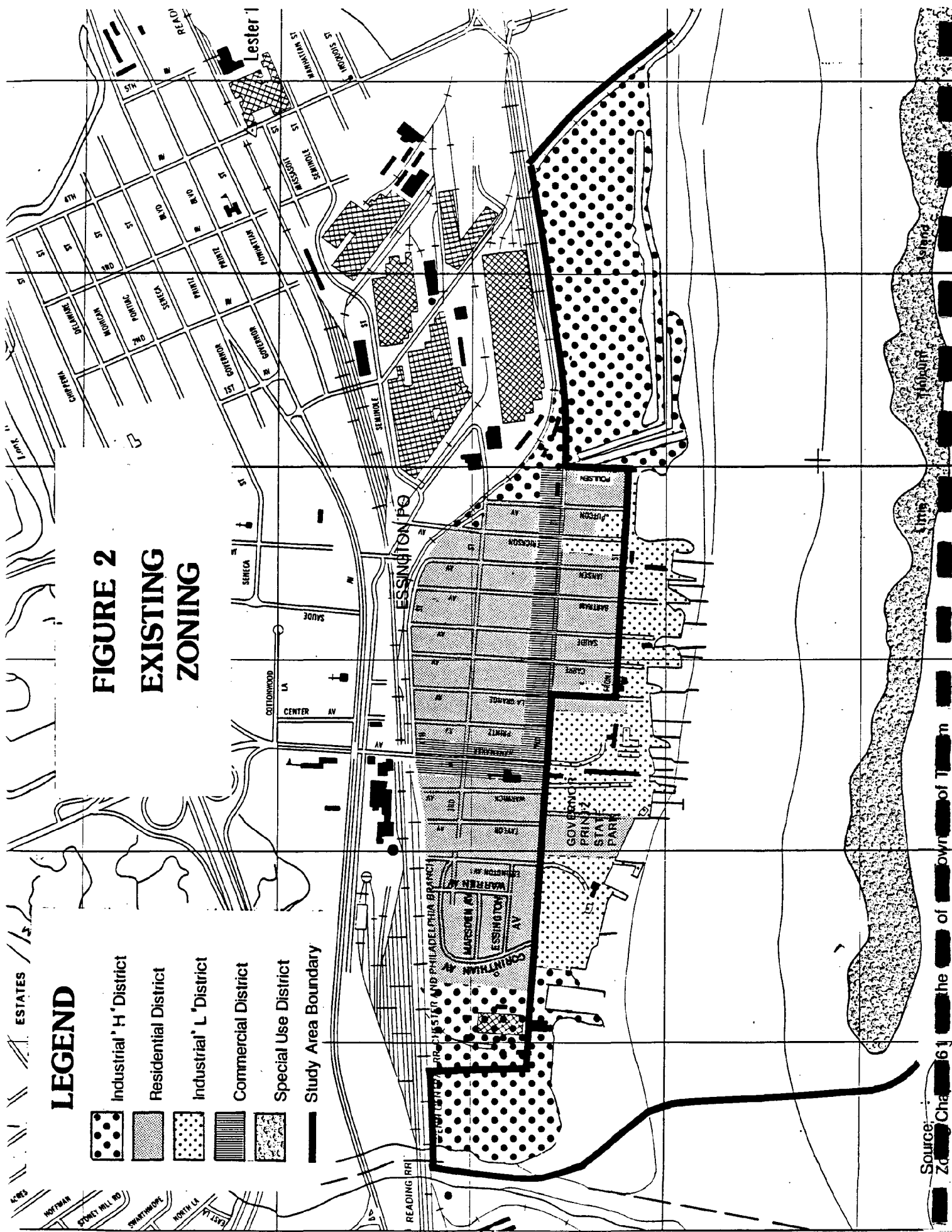
The only study area parcels zoned Industrial "H" lie at the southwestern and southeastern corners of the study area (Parcels #1 and #43). As with the Industrial "L" District, the zoning regulations list only those uses specifically prohibited in the district. The two prohibited uses which are permitted by special exception are open-lot storage (under the same general conditions as the Industrial "L" District) and freight, air, or motor freight stations.

Governor Printz State park is the only parcel in the study area zoned for residential use. Recreational uses (if publicly owned and operated) are permitted in this district. Little Tinicum Island (an open space parcel owned and managed by the Pennsylvania Department of Environmental Resources, Bureau of Forestry), is zoned Special Use. Strangely enough, this district permits shopping centers, motels, offices, light manufacturing, and other uses as determined by the Board of Commissioners after a hearing. Area regulations for this district require a minimum lot area of four acres and at least 200 feet of road frontage. Given the fact that it is highly unlikely that this parcel will ever be developed for the above permitted uses, it is unnecessary to delve into specific area and other regulations governing activities in this district.

For more information relating to the specific land uses and area and bulk requirements listed in the existing zoning ordinance, contact Tinicum Township.

**FIGURE 2
EXISTING
ZONING**

-



Proposed Zoning

In 1988, the Delaware County Planning Department prepared a revised Township zoning ordinance which has not yet been adopted. As can be seen in Figure 3, under the proposed ordinance the study area would be comprised of four new zoning districts. The bulk of the study area parcels would be zoned WA-Waterfront District, Parcel #1 would be zoned I-Industrial District, Parcel #43 would be zoned BCD-Business Center District, and Little Tinicum Island would be zoned OR-Outdoor Recreation District. Aside from specific zoning changes pertaining to the reduction in Essington's commercial zoning and the elimination of industrial uses in residential areas, the most significant difference between the present and proposed zoning ordinances is in the specification of permitted uses and area/bulk as well as other regulations for each zoning district. Another important aspect of this ordinance is that it sets forth very specific area/bulk, parking/loading, buffering/landscaping, and performance standards for both uses by right and conditional uses (see Appendix A). Because it appears that the proposed zoning regulations more adequately address the special needs of the study area, this zoning ordinance will be examined in greater detail than the existing zoning ordinance.

WA-Waterfront District¹

As stated in Section 61-6 of the zoning ordinance, the purpose of this district is to:

"...establish a coordinated, cohesive mixed-use waterfront development pattern devoted to a variety of waterfront-oriented and waterfront-dependent options, to include commercial, recreational, tourist, cultural and residential options; to maintain historic values and structures along the waterfront; to revitalize the waterfront by creative reuse of existing structures; and to provide emergency and public access to the waterfront."

This purpose is extremely significant in that it is the major impetus behind the preparation of this study.

The coordinated waterfront usage concept is very evident in the list of permitted uses (both by right and by conditional use) within the district. These uses are as follows in Table 1.

¹ For specific WA-Waterfront District language and standards, see Appendix B.

FIGURE 3 PROPOSED ZONING

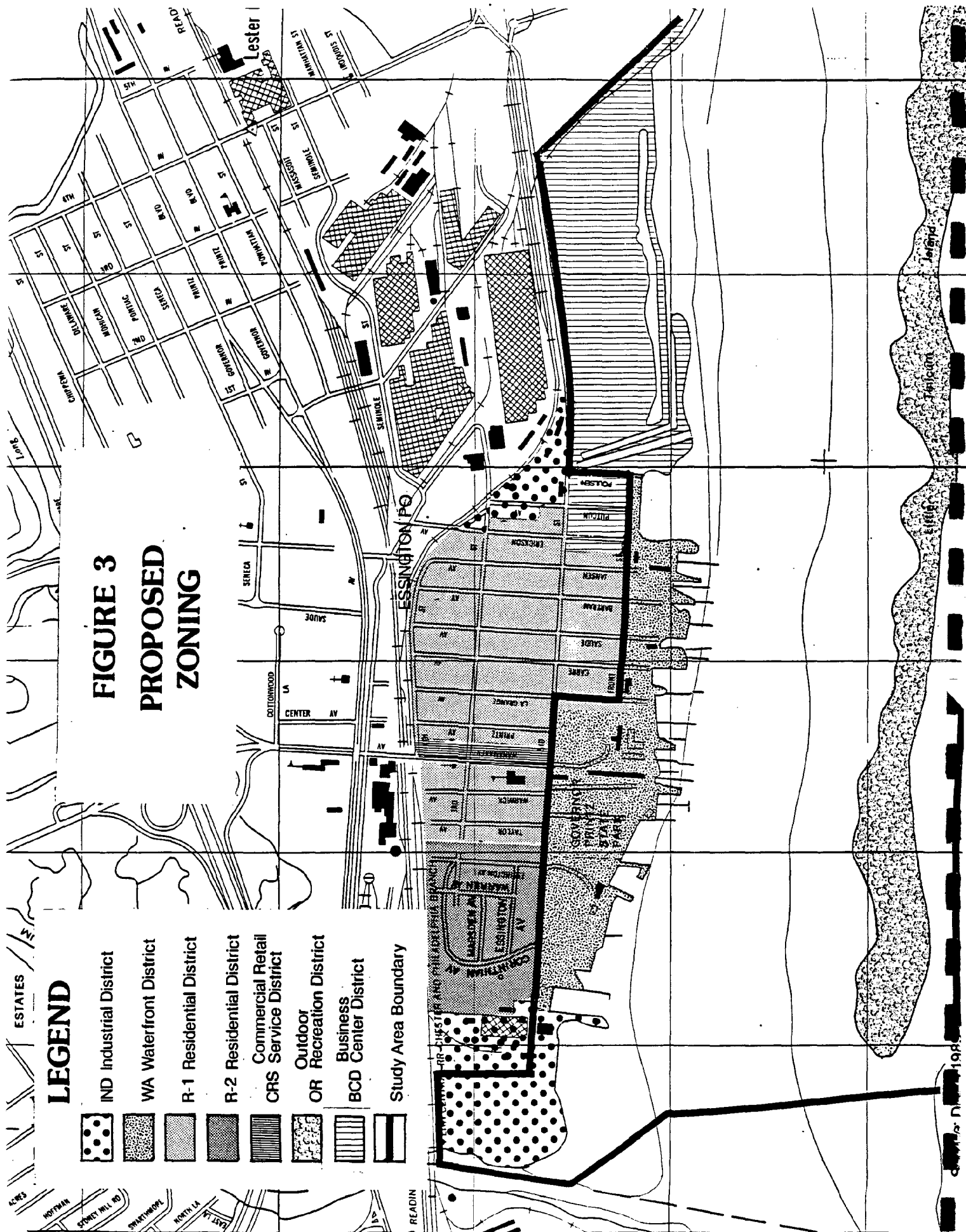


TABLE 1

PERMITTED USES - WA-WATERFRONT DISTRICT

Uses By Right

1. Marina, yacht club, seaplane base; and accessory sales, storage, and repair facilities.
2. Maritime motor vehicle service and repair stations.
3. Recreational facilities, including parks, suitable for fishing, picnicking, swimming, and other water sports.
4. Commercial centers, shops, stores.
5. Restaurants.
6. Motels, hotels, inns, and other similar establishments.
7. Residential development, including all uses permitted in the R-3 Residential Multi-Family District.
8. Port terminal shipping and receiving facilities.

Conditional Uses

1. Waterbased sport racing facilities.
2. Waterbased or water-related light industrial manufacturing uses.
3. Offices
4. Any other uses not enumerated but of the same general character as any of the aforesaid permitted uses subject to the conditions applicable to that type of use.

In essence, the above uses would allow for almost all activities provided that they are consistent with an overall waterfront development scheme.

I-Industrial District²

Stated in Section 61-10 of the zoning ordinance, the purpose of this zoning district is to:

"...provide for, maintain and facilitate the traditional manufacturing, storage and warehousing purposes and land uses in the Township consistent with current design and landscaping concepts; as further

- 2 For specific I-Industrial District language and standards, see Appendix C.

regulated by performance standards, to ensure that no significant off-site impacts are generated by the on-site uses, processes and/or activities."

Although many of the uses permitted in this district (see Table 2) are consistent with traditional waterbased industrial uses, the ordinance generally does not require that they be as such. The only reference to waterbased activities which the list of permitted uses contains is the list of those non-residential uses permitted in the WA-District (Note: residential land use is not permitted in this district.)

TABLE 2

PERMITTED USES - I-INDUSTRIAL DISTRICT

1. Manufacturing and office development.
2. Storage, warehousing, and distribution operations.
3. Wholesale trade.
4. Trucking facility and other transportation-related operations.
5. Motor vehicle sales.
6. Motor vehicle service and repair provided storage of vehicles is within enclosed structures.
7. Research and development facility, including prototype manufacturing.
8. Heliport when used in conjunction with a use permitted in this district. Such heliport shall not be used for a commercial use.
9. Non-residential uses as permitted by right in the WA-Waterfront District.
10. Other uses of the same general character as any of the aforesaid uses enumerated above.

BCD-Business Center District³

Section 61-9 of the zoning ordinance states that the purpose of the BCD District is as follows:

- ³ For specific BCD-Business Center District language and standards, see Appendix D.

"...to encourage and provide for flexible, long-term development of planned business centers consisting of multiple uses in an integration of designs; to promote strong project unity, treating separate but adjacent parcels in proximity to each other as a single entity; to allow for the clustering of buildings and open space so as to establish coverages and open space requirements for the entire district in lieu of a lot-by-lot development; and to allow for the sharing of service drives, parking, access areas, amenities and open space."

As seen above, the purpose behind the inclusion of this zoning district is far different from the previously mentioned zoning districts. This is because, in contrast to the WA- and I-Districts, BCD zoning can be found in several other portions of the Township. Although many of the permitted uses in Table 3 are not considered to be water dependent, these uses are not inconsistent with the permitted uses of the adjacent WA-District.

TABLE 3

PERMITTED USES - BCD DISTRICT

1. Office development.
2. Banks and/or financial institutions.
3. Retail stores.
4. Motel or hotel.
5. Restaurants.
6. Personal service shops.
7. Convention center.
8. Research and development facility.
9. Light manufacturing.
10. Warehouse and distribution center.
11. Food preparation and catering service.
12. Freight, transportation, and shipping facilities, but not valet parking operations as a use by right.

OR-Outdoor Recreation District⁴

The proposed zoning change of Little Tinicum Island from Special Use to Outdoor Recreation District would bring this parcel of ground into conformance with its present and long-term use. Section 61-12 of the zoning ordinance states the following purpose for this zoning district:

"...to provide for public outdoor recreational, educational and scientific activities, including the necessary physical improvements such as interpretive centers, trails, river and creek access, and other recreational facilities; to preserve public land with appropriate management techniques, including environmental protection, restoration and enhancement; and to protect adjacent lands from stormwater impacts by appropriate engineering practices."

The inclusion of this zoning district and its list of specific permitted uses was unquestionably designed to address this island's environmental and recreational values relative to the Essington waterfront (see Table 4).

TABLE 4

PERMITTED USES - OR-OUTDOOR RECREATION DISTRICT

1. Outdoor recreation, both land- and water-based.
2. Environmental education and scientific endeavors, including interpretive centers and related physical improvements.
3. Land and water maintenance, restoration, and upgrading activities, to include species and habitat preservation.
4. Stormwater management facilities.
5. Other public uses and facilities.

It should be noted that this ordinance gives consideration to the island's status as state forest land in that the ordinance does not specify area and bulk requirements for this district.

Residential and Commercial Zoning

Due to the fact that Residential and Commercial Zoning District standards are cross-referenced in several zoning district requirements, these standards have been included in Appendix F.

⁴ For specific OR-Outdoor Recreation District language and standards, see Appendix E.

Little Tinicum Island Feasibility Study

In November 1985, the Pennsylvania Department of Environmental Resources, Office of Resources Management, Bureau of Forestry, released a study prepared by Tredinnick/Waetzman Associates entitled "Little Tinicum Island: An Environmental Analysis and Evaluation of Alternative Plans." The purpose of this study was to evaluate Little Tinicum Island, which is owned by the State of Pennsylvania and managed by the Bureau of Forestry, for its recreational development potential. Major elements of the study included evaluations of the island's flora and fauna, physical characteristics of the island as well as tides and navigation, a survey of boaters (which included information on current usage and recommendations for future usage), and an analysis of facilities construction costs.

The following information about the island has been paraphrased from the study:

Physical Characteristics

The island, which may have developed as a result of silt deposition along an inside curve of the Delaware River, is slowly changing. It appears that the southwestern end of the island is eroding away, while the eastern tidal flats and shoals remain stable. Waves from passing freighters tend to erode island shores that are unprotected by the Three Square Bullrush tidal flats. Sandy beaches make up much of the southern shore of the island. Soils on this island are classified as TM-Tidal Marsh.

Tides and Navigation

The tides near Little Tinicum Island are 5.7 foot semi-diurnal tides. There are no navigational aids for boaters marked on charts of the area. The western portion of the back channel has been designated by the United States Coast Guard as a special anchorage area for pleasure craft. Navigation in the back channel is difficult at low tide, particularly for sail boats and deep draft vessels. Mudflats extend out an average of 300 feet around the island; at the east end of the island, mudflats extend out 1,200 feet. The entire island is in the 100-year floodplain of the Delaware River.

Water Quality

Although the study indicates that the overall quality of the Delaware River is improving, the Delaware River Basin Commission estimates that floodwaters and sewage which flow downstream during heavy rainstorms contribute to the lowering of local water quality. The study also reports that water quality near the island is very poor because Philadelphia's sewage treatment plants which lie upstream

are still discharging effluents. Water quality testing in this part of the river is performed at Paulsboro, New Jersey (but water quality can vary greatly up or downstream from this point). Water quality standards for boating and swimming are 770 counts/ml. and 200 counts/ml. of fecal coliform, respectively. Between 1984 and 1985, of the 17 sampling days, the water quality never met the swimming standard and only met the boating standard twice.

Vegetation and Geomorphology

The island is encircled by tidal freshwater wetlands. The interior of the island is composed of scrub forests and disturbed areas of fill and vegetation (see Figure 4). A number of plant species of concern (several of rare status) are located on the island. Many of the plants (of both common and rare status) provide significant food value to the resident and migratory wildlife population. Fires are an annual occurrence on the island in the summer months.

Fish

The waters surrounding the island (in particular the back channel) provide an important habitat and spawning ground for fish. Saltwater crabs have been reported near the island in summer and fall, and flounder have been observed near the island. The Fish Commission believes this area should be protected as a natural area and feels that any disruption of the shoreline or back channel through dredging would have a negative impact on local fisheries. This area is also stocked with tiger muskelunge by the Fish Commission. It is believed that some of the fish and wildlife in this area may be contaminated with PCB's.

Birds

Little Tinicum Island is an important bird habitat. It is also a stopover area for migratory birds due to its location along the Atlantic Flyway. Several endangered and threatened species of birds have been sighted in this area.

Mammals

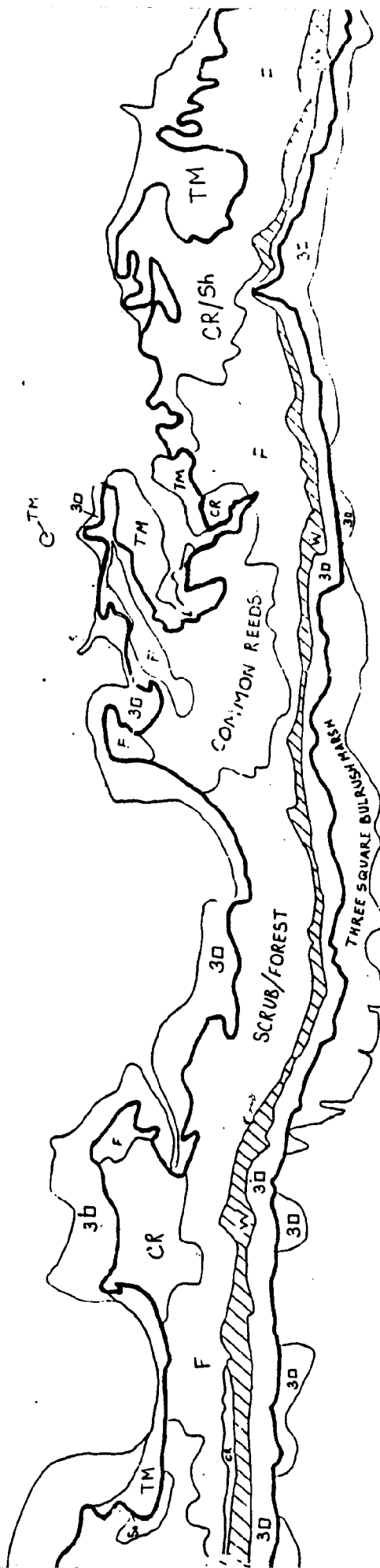
A number of small mammals have been sighted on the island.

Boater Survey

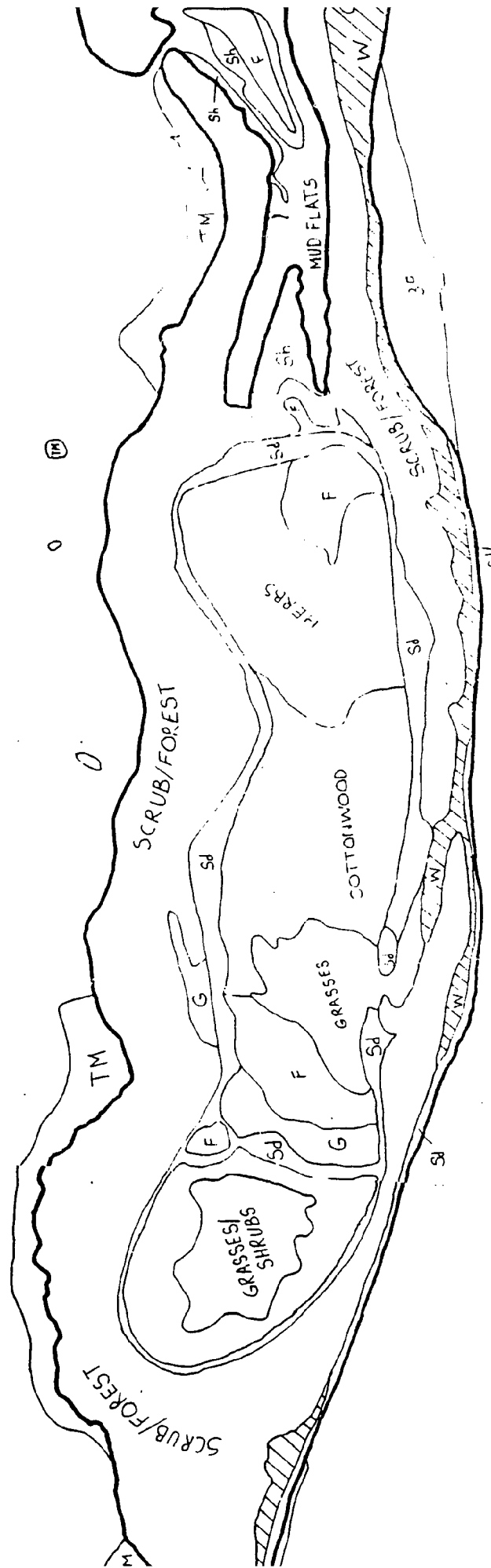
In order to better determine potential recreational uses for the island, a survey of boaters found on or near the island was performed. The results of this survey can be found in Appendix G.

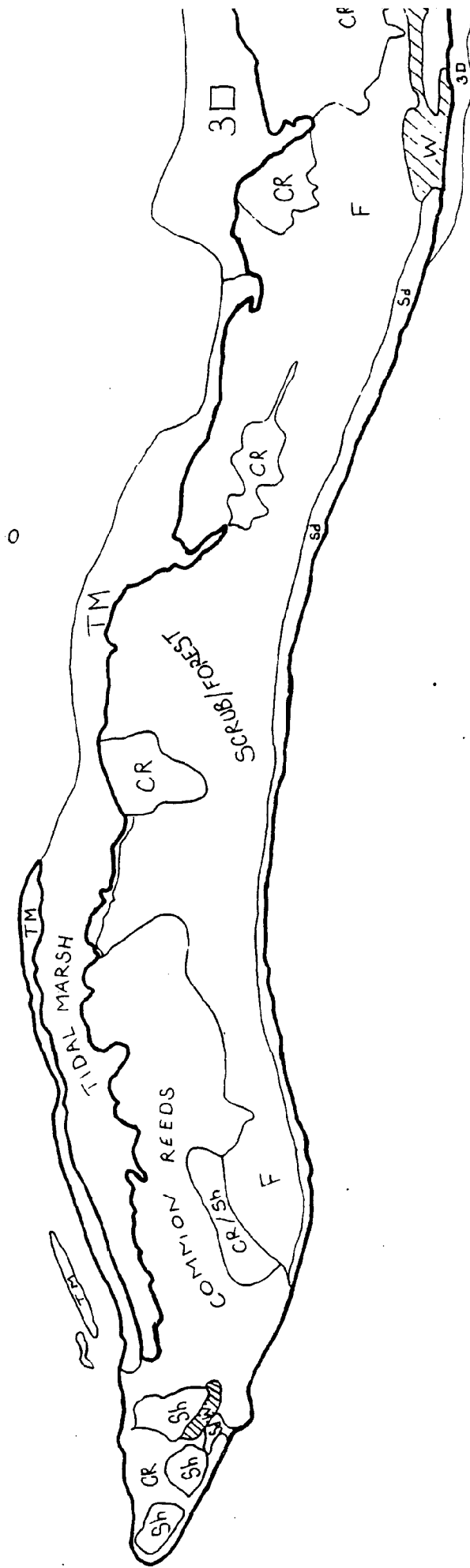
FIGURE 4

LITTLE TINICUM ISLAND



SOURCE: U.S. Department of the Interior, Fish and Wildlife Service, "Draft Master Plan - The Tinicum National Environmental Center," 1978.





VEGETATION KEY:

TM TIDAL MARSH (UPPER & LOWER)
3□ THREE-SQUARE BULRUSH MARSH
CR COMMON REEDS
Sh SHRUBS
F SCRUB/FOREST
W▨ WOOD DEBRIS
G GRASSES
H HERBS
Sd SAND

Study Outcome

The outcome of the study was a series of four plans for consideration. A brief synopsis of these plans is as follows:

Plan A - Do little or nothing to the island

Pro	:	freedom and independence of visitors is preserved
Con	:	no restraint would be imposed which would protect existing wildlife and wildlife habitats
Evaluation:		current level of usage is low; therefore, it is felt that there would be few impacts
Permitted Activities:		backpacking/boating-type camping and picnicking
Costs	:	minimal (only for signs marking the camping areas)

Plan B - Designate island as a natural area

Permitted Activities:		camping, fires, possibly swimming (a water quality consideration), wildlife refuge
Prohibited Activities:		duck blind construction, hunting (or limited hunting even though hunting is generally permitted in natural areas)
Additional Comments :		Bureau of Forestry and Fish Commission could designate the island as a refuge for reptiles and amphibians - catching or killing would be prohibited
Costs	:	2 trash cans and clearance of a short trail (\$ depends on cost of labor and length of trail)

Plan C - Provide recreational facilities for boaters and hunters (Natural area designation would apply)

- Construction of facilities on south side of island

Permitted Activities:		hunting, swimming, camping, and fires (designated areas)
Prohibited Activities:		duck blind construction

Improve- nature trail, boardwalk over
ments : wetlands, aids to navigation, docks,
moorings, toilets, trash cans

Costs : \$30,000-53,000

Plan D - Designation of island as Special Use Area or
State Park (if the # of visitors substantially increases)

- Limit access to the south shore (to limit wildlife disturbance and preserve tidal marsh plants)

Permitted picnicking, mooring
Activities:

Prohibited hunting and fires, boats on land
Activities:

Improve- docks, toilets, picnic tables,
ments : grills, trails - Enforcement

Costs : (see C plus \$3,000 and an employee staff)

Synopsis

A, B, C - for current level of usage with moderate increase. If the level of visitors increased significantly, access may need to be restricted or limited.

D - would require enforcement staff

Present Policy

According to the Bureau of Forestry, the State's present policy for Little Tinicum Island is that it be left in its natural state. The Bureau does not envision any immediate changes in its list of permitted activities which include hunting, camping, picnicking, and camp fires. The Bureau also does not have any immediate plans for improvements (i.e., trails, docks, etc.) to the island. Any future designation as a "natural area" would result in more environmental protection in the form of prohibitions on the disturbance of flora or fauna, etc.

Tinicum National Environmental Center Master Plan

History

Tinicum Marsh, located near the juncture of Darby Creek and the Delaware River, and Little Tinicum Island, located in the Delaware River along the Essington waterfront, comprise Delaware County's only large existing wetland area. In fact, they represent nearly all of Pennsylvania's tidal

wetlands. Once encompassing approximately 13,000 acres, this tidal freshwater marsh has been reduced to just a fraction of its original size (approximately 900 acres) as a result of years of landfill and development activities. This area continues to serve as a home and migratory stop-over for a number of common and endangered species of wildlife.

In previous years the only portion of this marsh which was protected was an area, operated by the City of Philadelphia, Department of Recreation, known as the Tinicum Wildlife Preserve. Then, in 1972, in recognition of the marsh's critical value and need for protection, the Tinicum National Environmental Center (TNEC) was established by Public Law 92-326 as a unit of the National Wildlife Refuge System. This Act authorized the acquisition of lands deemed necessary for the preservation, restoration, and development of Tinicum Marsh and the construction, administration, and maintenance of a wildlife interpretive center for the promotion of environmental education and the study of wildlife in its natural habitat.

"The U.S. Fish and Wildlife Service...in keeping with its overall mission for the National Wildlife Refuge System, has recognized three major purposes of the Tinicum Environmental Center.

- a) To preserve the natural resources of the Tinicum Marsh which represents the largest freshwater tidal marsh that remains in Pennsylvania.
- b) To provide environmental education opportunities for the schools and residents of the surrounding region.
- c) To provide quality wildlife-oriented recreation opportunities for the enjoyment of people in the surrounding region when it will not interfere with the primary purpose for which the area was established".⁵

As of 1983, TNEC encompassed 900 acres (145 of which were originally set aside as a wildlife preserve and given to the Department of the Interior in 1974 by the City of Philadelphia). Plans have been made to acquire more land which will bring the total number of acres to approximately 1,200. A master plan for development of the center was prepared by the U.S. Fish and Wildlife Service in 1978. It was approved by the U.S. Department of the Interior in 1981. The recommendations of the plan are as follows.

⁵ U.S. Department of the Interior, Fish and Wildlife Service, "Draft Master Plan - The Tinicum National Environmental Center," 1978.

The TNEC Master Plan

The TNEC Master Plan placed its emphasis on the alternatives for satisfying four major program objectives as well as public facilities siting. These objectives are as follows:

1. Habitat preservation and restoration
2. Environmental education
3. Wildlife oriented recreation
4. Non-wildlife oriented recreation

The recommendations resulting from the study's evaluations can be seen in Table 5.

TABLE 5

TNEC MASTER PLAN RECOMMENDATIONS

1. Habitat Preservation and Restoration

- Maintain all existing tidal wetlands.
- Where feasible, restore former wetlands as tidal wetlands (i.e., certain existing non-tidal wetlands excavated tidal lagoons).
- Impounded wetlands which cannot be restored to tidal wetlands should be managed as open water and managed marsh habitats.
- Excavated tidal lagoons which cannot be restored to tidal wetlands should be managed as open water habitats.
- Filled wetlands which cannot be restored to tidal wetlands should be managed as transitional and upland habitats.
- Natural uplands shall be managed as transitional and upland habitats.

2. Environmental Education and Interpretation

- The education and interpretative program should be based on six month themes: (1) Tinicum's wetland ecology; (2) values of environmentally sensitive areas; (3) history of the region; (4) wetland habitat management in the U.S.; (5) Delaware estuary ecology; and (6) alternate energy sources.

TABLE 5

TNEC MASTER PLAN RECOMMENDATIONS
(CONTINUED)

- Emphasis should be placed on direct outdoor experiences.
- An environmental education building should be constructed to provide exhibit space, auditoriums, classrooms and laboratories, and required support facilities.
- Educational/interpretive experiences should be provided to fit varied needs of different visitors including the handicapped.
- A teacher training program should be maintained to enable teachers from the region's school systems to use the Center for their classes, as opposed to the Center providing all teaching staff.

3. Wildlife Oriented Recreation

- Habitats and facilities provided to achieve other objectives of the Center should be designed wherever possible for multiple use by visitors seeking wildlife oriented recreation.
- An extensive land-based network for dike and upland trails and wetland boardwalks should be provided.
- A waterbased trail network should be designed for visitors desiring to use canoes and other similar craft.
- Opportunities for recreational fishing should be provided.

4. Non-Wildlife Oriented Recreation

- Non-wildlife oriented recreation activities should be deferred until substantial progress has been made towards fulfilling the mandated objectives of the Center.
- Should the need exist to reconsider non-wildlife oriented recreation, further consideration should be given to the former Folcroft landfill and certain contiguous natural upland areas as potential sites for non-wildlife oriented recreation.

5. Locations of Major Public Facilities

- The major entrance to the Center should be from Lindbergh Avenue, which would provide direct

access to the eastern section of the project area. A minor entrance should be located from Wanamaker Avenue to provide direct access to the western section of the project area.

- No public access road system should be provided beyond the parking areas at the east and west entrances to the Center.
- The environmental education building should be located on the eastern section of the project areas, to take advantage of future public transportation access and proximity to managed wet land and open water habitats.

SOURCE: U.S. Department of the Interior, Fish and Wildlife Service, "Draft Master Plan - The Tinicum National Environmental Center," 1978.

As part of the Master Plan's efforts to evaluate TNEC's future needs, programs, and final recommendations, the study attempted to estimate the future usage of the facility. Due to the fact that there are no other facilities comparable to TNEC, it was difficult to estimate the exact number of users expected to visit the site. However, the study did indicate a range of visitors based upon previous usage information. The figures ranged from 68,000 visitors per year (with little or no sustained effort to inform the public of TNEC's programs) to 400,000 visitors per year (if there were to be an effective dissemination of public information). Although it was expected that the maximum projection of 400,000 visitors per year would not create usage conflicts with the purposes of the Center, the average of the two figures listed above (245,180 visitors) was used for master planning purposes. See Table 6.

TABLE 6

TNEC PROJECTED VISITORS⁶

Minimum and maximum projections, with profiles of visitors by type, are presented in the following tabulation.

<u>Average Weekday</u>	<u>Minimum</u>	<u>Maximum</u>
School groups	175	700
Special groups	20	60
Residents of metropolitan region	25	200
Other	5	125
Per day	225	1,085
Per week	1,125	5,425

⁶ U.S. Department of the Interior, Fish and Wildlife Service, "Draft Master Plan - The Tinicum National Environmental Center," 1978.

TABLE 6

TNEC PROJECTED VISITORS
(CONTINUED)

<u>Average Weekend Day</u>	<u>Minimum</u>	<u>Maximum</u>
Special groups	20	300
Residents of metropolitan region	60	800
Other	10	250
Per weekend day	90	1,350
Per weekend	180	2,700
Total per week	1,305	8,125
Total annual	67,860	422,500
Projected minimum annual attendance		67,860
Projected maximum annual attendance		422,500
Average of above projected attendances		245,180

Essington Waterfront Impacts

Should the Essington waterfront study area be developed to accommodate additional (most likely weekend) recreational users and visitors, it is likely that TNEC will also feel the impacts resulting from an overflow effect onto the facility. Given the fact that the master planning performed was based on a 245,180 visitor estimate (with facilities having the ability to accommodate 400,000 visitors), it is unlikely that waterfront development would strain TNEC's resources.

SECTION VII

PARCEL ANALYSIS

For the purpose of parcel analysis, the study area parcels were mapped from the Delaware County Board of Assessment Tax Maps; each was assigned a number so that it could be easily identified and referenced in the text. A copy of this map (titled Figure A) can be found in the back pocket of this document.

Each of the individual study area parcels was researched using print-outs supplied by the County Board of Assessment. Data compiled included parcel owner and address, location, assessed value, last date purchased, purchase price, and approximate acreage. (See Table 1). It should be noted that the information provided by the Board of Assessment is sketchy and that acreages on Table 1 are as indicated in County records. It should also be noted that upon visual examination of the tax maps, the Planning Department noted some obvious errors in acreage. Such errors were corrected and noted on the table.

Parcel Inventory Analysis

As can be seen in Table 1, only a small percentage of the parcels show any record of sale/purchase. The County Board of Assessment believes that this may be a result of a combination of long-term ownership and intra-family sales and transfer. It should be noted that a number of the study area parcels are approximately 25' X 100' in size (or some multiple thereof). Even though these lots appear to be extremely small, the Board of Assessment reports that many of the lots have been merged in order to allow for the construction of single-family dwellings located on more than one lot. Some of the smaller lots have never been developed.

Visual Parcel Evaluation

Based on a drive-through of the study area, each individual parcel in the study area was visually assessed for its existing land use, its status (active, vacant, underutilized), physical access constraints, aesthetics, and potential land use.

Many of the smaller residential parcels (such as the 25' X 100' lots) were very difficult to evaluate due to their size and the appearance that structures straddled lot lines. The larger (and more readily developable) parcels were easier to evaluate. Due to the number of parcels in the study area (42), this section of the study will not go into a parcel by parcel evaluation. Rather, the following section will discuss those parcels which the Planning Department deems significant due to their existing land use,

TABLE 1

STUDY AREA PARCEL INVENTORY

Parcel #	Owner and Address	Parcel Location	Assessed Value	Last Date Purchased	Purchase Price	Approximate Acreage
1	Piasecki Aircraft P.O. Box 360 Essington, PA 19029 (Title held by: DCIDA One S. Olive Street Media, PA 19063)	2nd Street Plant	\$ 90,000	07/05/85	\$ 1	39.6 ac.*
2**	Philadelphia Electric Company 2301 Market Street Philadelphia, PA 19101	Second Street	8,700	12/19/77	206,400	5 ac.
3	Corinthian Yacht Club 2nd Street Essington, PA 19029	2nd Street west of Taylor Avenue	20,000	04/10/88	1	10.4 ac.
4	Commonwealth of Pennsylvania Pennsylvania Historical and Museum Commission P.O. Box 1026 Harrisburg, PA 17120 (2 parcels)	Governor Printz Park	20,000 (combined)	11/03/80	2 (combined)	5 ac.
5	John Bosacco 2nd Street and Taylor Avenue Essington, PA 19029	Walbers 2nd & Taylor Avenue	137,600	-	-	6.77 ac.
6	Randle J. & Eleanor Hommel 128 Taylor Avenue Essington, PA 19029	145 Taylor Avenue	800	-	-	25' X 105'
7	Randle & Eleanor Hommel 145 Taylor Avenue Essington, PA 19029	104 Taylor Avenue	1,400	-	-	51' X 121'
8	Riverside Yacht Club Wanamaker Avenue Essington, PA 19029	Old Lazaretto Tr	3,000	-	-	100' X 547' 111'

* DCPD correction per Board of Assessment Parcel Map

** Recently transferred to the West End Boat Club

TABLE 1
STUDY AREA PARCEL INVENTORY
(CONTINUED)

Parcel #	Owner and Address	Parcel Location	Assessed Value	Last Date Purchased	Purchase Price	Approximate Acreage
9	Robert Mills (Seaplane Base) 2nd Street Essington, PA 19029	2nd Street	\$ 11,000	-	\$ -	367' X 1043' X 111'
(10)	D & J Associates 39 Industrial Highway Essington, PA 19029	79 LaGrange Avenue	21,000	07/02/86	350,000	236' X 240'
11	Edward Laub (et ux) 95 LaGrange Avenue Essington, PA 19029	95 LaGrange Avenue	1,000	-	-	50' X 98'
12	Gordon Wills (et ux) 99 LaGrange Avenue Essington, PA 19029	100 LaGrange Avenue	800	-	-	25' X 98'
13	Gerald Johnson 101 LaGrange Avenue Essington, PA 19029	101 LaGrange Avenue	2,000	03/05/84	63,200	50' X 98'
14	Melvin & Evelyn Jacobs 331 Warwick Avenue Essington, PA 19029	102 LaGrange Avenue	200	-	-	50' X 98'
15	Arthur J. & Susan P. Jacobs 102 LaGrange Avenue Essington, PA 19029	102 LaGrange Avenue	1,800	-	-	100' X 98'
16	Daniel R. & Barbara M. Stokes 118 LaGrange Avenue Essington, PA 19029	118 LaGrange Avenue	1,600	11/14/80	43,000	63' X 99' X 25' X 98' 87.5' X 98.8*
17	Joseph Jarek (et ux) 125 LaGrange Avenue Essington, PA 19029	125 LaGrange Avenue	900	-	-	38' X 98' X 85' X 94' 38.2' X 98.9' *

Stub Street Parcel

* DCPD correction per Board of Assessment Parcel Map

TABLE 1

STUDY AREA PARCEL INVENTORY
(CONTINUED)

Parcel #	Owner and Address	Parcel Location	Assessed Value	Last Date Purchased	Purchase Price	Approximate Acreage
18	Edward M. & Kathleen M. Campanile 127 LaGrange Avenue Essington, PA 19029	127 LaGrange Avenue	\$ 1,100	09/02/82	\$ 30,000	74' X 99'
19	Stephen R. Emplitt (et ux) 138 LaGrange Avenue Essington, PA 19029	138 LaGrange Avenue	1,200	-	-	75' X 99'
20	Walter G. & Yvonne Lee 140 LaGrange Avenue Essington, PA 19029	140 LaGrange Avenue	1,300	09/18/85	57,000	25' X 99'
(21)	Melvin & Evelyn Jacobs 331 Warwick Avenue Essington, PA 19029	Carre Avenue West	8,500	-	-	2 ac.*
(22)	Riverfront, Inc. P.O. Box 547 Drexel Hill, PA 19026	Saude & Front Sts.	16,800	05/06/88	400,000	2.2 ac.
(23)	Christine Templin 402 Front Street Essington, PA 19029	Front Street	2,000	03/20/85	1	125' X 236'
(24)	Judith Newlin 552 Biddle Street Chesapeake, MD 21915	Bartram Avenue	3,500	03/20/85	1	125' X 210'
(25)	Fox Grove Marina 8 Bartram Avenue Essington, PA 19029	Bartram Avenue (Dock)	3,000	03/31/86	22,500	2.55 ac.
(26)	Leonard Lynch (et ux) 8 Bartram Avenue Essington, PA 19029	E 11 Bartram Avenue	1,000	-	-	25' X 25' 50' X 445' X 75'*

○ Stub Street Parcel

* DCPD correction per Board of Assessment Parcel Map

TABLE 1

STUDY AREA PARCEL INVENTORY
(CONTINUED)

Parcel #	Owner and Address	Parcel Location	Assessed Value	Last Date Purchased	Purchase Price	Approximate Acreage
(27)	Francis Marr 6 Bartram Avenue Essington, PA 19029	6 Bartram Avenue	\$ 2,200	-	\$ -	83' X 50'
(28)	Walter Jarek (et ux) 500 Front Street Essington, PA 19029	500 Front Street	1,000	-	-	25' X 125' 25' X 100'*
(29)	Francis A. Marr (et ux) 502 Front Street Essington, PA 19029	502 Front Street	800	-	-	25' X 125' 25' X 135'*
(30)	James F. Duncan (et al) 504 Front Street Essington, PA 19029	Front Street S. 50 Fr.	400	-	-	25' X 125'
(31)	James F. Duncan (et al) 504 Front Street Essington, PA 19029	504 Front Street	500	-	1	25' X 125' 25' X 400+*
(32)	Mary C. & Joseph Kepler 506 Front Street Essington, PA 19029	506 Front Street - rear	200	-	-	25' X 100' 25' X 300+*
(33)	Mary C. & Joseph Kepler 512 Front Street Essington, PA 19029	506 Front Street	200	-	-	Lot 4
(34)	Mary C. & Joseph Kepler 508 Front Street Essington, PA 19029	508 Front Street	500	-	-	25' X 530'*
(35)	Kenneth Hangland 510 Front Street Essington, PA 19029	Front Street	800	-	-	25' X 530'*

○ Stub Street Parcel

* DCPD correction per Board of Assessment Parcel Map

TABLE 1

STUDY AREA PARCEL INVENTORY
(CONTINUED)

Parcel #	Owner and Address	Parcel Location	Assessed Value	Last Date Purchased	Purchase Price	Approximate Acreage
36	Francis A. & Patricia J. Brolley 108 Erickson Avenue Essington, PA 19029	Corner Front and Jansen	\$ 8,000	-	\$ -	50' X 530'
37	Ray R. Brown (Anchorage Marina) 1404 Thrush Lane West Chester, PA 19380	Front and Jansen	12,500	03/20/81	1	200' X 540'
38	Russell Zurinsky 240 LaGrange Avenue Essington, PA 19029	Erickson E. SE Co.	300	-	-	200' X 560'
39	Fred H. Hoffken 215 Bartram Avenue Essington, PA 19029	Putcon Avenue	300			200' X 580'
40	Francis A. Brolley 109 Carre Avenue Essington, PA 19029 (2 parcels)	4 Poulsen Avenue	40,500 (combined)	-	-	640' X 126' X 350' X 700+
41	Tinicum Properties Assoc. Ltd. 10 Industrial Highway Lester, PA 19029	Route 291	1,380,000 (entire parcel)	07/03/86	9,000,000	230 ac.
42	Commonwealth of Pennsylvania Department of Forests and Waters 3rd and Reilly Streets Harriburg, PA 17120	Little Tinicum Island	30,000	12/07/82	100,000	157 ac.*

SOURCE: Delaware County Board of Assessment, March 1989.

* DCPD correction per Board of Assessment Parcel Map

size, vacant or underutilized status, and development potential. It should be noted that all waterfront parcels in the study area lie within the 100-year floodplain.

Parcel 1 - Piasecki Aircraft

This site is one of the most significant parcels in the entire study area. Even though there is currently a light industrial operation (with related structures) on this site, much of this 39.6 acre parcel is vacant and can be considered underutilized. The only other land use on this parcel is the Fish Commission boat dock and office trailer. Access to the site is via Second Street; access to the boat dock is via an unpaved road.

Almost all of this parcel lies within the 100-year floodplain, the western and southern portions contain wetlands (per the National Wetlands Map (NWI)), and the western half of the site contains hydric soils. This means that intensive development of the site for anything other than open space, park or recreation (OSPR) purposes may come under close scrutiny by the regulatory agencies. It should be noted that the existing Fish Commission boat dock area (at the southeastern end of the parcel) appears to offer the greatest potential for a waterfront public access area.

Parcel 2 - Philadelphia Electric Company - West End Boat Club

This parcel, which Table 1 indicates belongs to PECO, was recently transferred to the owners of the West End Boat Club, located in the City of Chester. The site is currently vacant and there is no paved access to the parcel.

Much of the site lies within the 100-year floodplain and contains hydric soils. The NWI indicates a wetland along the shoreline. As with Parcel 1, the best use for this site is OSPR. Given the fact that the parcel was recently transferred to the West End Boat Club (a social club which maintains a small number of boats), it is reasonable to assume that a similar, and possibly expanded, marina use of the parcel can be expected for this site.

Parcel 3 - Corinthian Yacht Club

The current land use on this site is that of a private social club. An interview conducted several years ago indicated that siltation along the shoreline has limited its use as a boating facility. Although the site is currently active as a social club, it is underutilized as a boat club due to the siltation problems. Access to the parcel is excellent.

Visually, the parcel has a distinct park/estate-like atmosphere. Given the private nature of this already developed site, it is suggested that it be left as is.

Parcel 4 - Governor Printz Park

This state-owned park is actively used as such. Access is very good, with ample parking available adjacent to Walbers Restaurant. This park does, however, need aesthetic improvements and better signage. Given the outstanding nature of the views of the river from this site, special attention should be given to shoreline treatment.

Parcel 5 - Bosacco-Walbers

This parcel is another significant study area parcel. It has been developed with a number of mixed uses, the primary one being a motel/restaurant. The property is very active, but the deteriorated boat dock facilities and oversized parking area render this parcel underutilized. Access to the site is good.

The recommended use for this site is to continue its current operations with an expansion and improvement of its existing piers. The site is in dire need of landscaping, improved signage, and other aesthetic improvements.

Parcel 8 - Riverside Yacht Club

This parcel is a private yacht club with existing piers and boat dock area. Access to this site is good (via a shared driveway with Parcel 9). This site, which is adjacent to a seaplane base could benefit from better signage and landscaping to improve the overgrown appearance of the accessway. The land use on this site should be left as is.

Parcel 9 - Robert Mills Seaplane Base

This site may be the most significant site in the study area. It is currently occupied by a number of mixed uses including a commercial boat launch/repair/storage operation, seaplane base, dock, and museum/office. The most significant structure on the site is the old Lazaretto building, an historic structure dating back to 1800. Access to the parcel could be greatly improved by removing the uncontrolled growth along the driveway it shares with the Riverside Yacht Club. This site is greatly underutilized.

The parcel, when combined (or developed in a unified manner) with parcels 4 and 5, has the potential to become the hub of the Tinicum waterfront. The focal point of this parcel should be the Lazaretto. Before this is done, however, the owner of this parcel must do whatever is possible to improve the aesthetics of the entire property, in particular the boat storage area. Better public access and improvements to the existing boat launch and pier system is crucial to the maximization of this parcel's potential.

Parcel 21 - Jacobs-Rossi Boat Yard

This parcel is actively used for boat storage and repair. Access to the site is good. The parcel could benefit from aesthetic improvements. The recommended use for this site is to have it remain as is.

Parcel 22 - Riverfront, Inc.

This parcel is currently vacant but has recently been purchased for the purpose of development into a multi-family residential housing complex with marina slips. Even though the parcel lies in the 100-year floodplain, the proposed structures can be floodproofed to comply with local regulations. Access to the site is good. The proposed land use seems appropriate for the site.

Parcels 23 and 24 - Templin and Newlin

These parcels are currently occupied by single-family dwelling units on relatively large lots. Access to these parcels is good. Although these two lots are currently being used as residences, if the lots were to be combined with Parcel 25, the entire parcel would have exceptional development value as a large waterfront marina facility.

Parcel 25 - Fox Grove Marina

This parcel is occupied by a private marina facility. The facility is active and has a somewhat park-like atmosphere. Access to this parcel is via Bartram Avenue, a narrow residential street. Even though it is recommended that the existing land use continue at this site, better access is needed to negotiate boats and trailers on Bartram Avenue. If this parcel were to be combined with Parcels 23 and 24, such access as well as more facilities could be provided.

Parcel 26 - Lynch

This parcel appears to be used as a boat yard area for Fox Grove Marina. Access to this parcel is also via Bartram Avenue (at the terminus of the street) and has the same problems as Parcel 25. This parcel is in need of aesthetic improvement.

Parcels 27 through 36

These parcels contain a number of existing residences. Should it ever be possible to assemble these parcels, they would produce a good development site. Such a scenario appears unlikely at this time.

Parcel 37 - Brown-Anchorage Marina

This parcel contains a number of warehouses, a boat yard, boat launch, and a snack bar. It appears to be underutilized as a marina facility. This parcel is difficult to access and is in need of aesthetic improvements. Signage improvements are greatly needed. This site should be further investigated for its waterfront access potential.

Parcels 38 and 39 - Surinsky and Hoffken

Even though these narrow vacant parcels are zoned for industrial use, they are virtually unusable as such due to their size and location. These parcels (if combined) could, however, serve as a passive recreation area with benches or tables for overlooking the river. It should be noted that just north of parcel 29 (outside of the study area), there is a vacant lot which might be able to be developed with a view of the river in mind.

Parcel 41 - Tinicum Properties

This parcel (which is part of the Tinicum Properties industrial park to the north) is a very large vacant tract of land. It lies completely in the 100-year floodplain. The NWI also indicates that much of this area is wetlands. A wet site such as this could be difficult to develop given current environmental regulations.

SECTION VIII

REGULATORY ISSUES

Before selecting a site for development it is important to consider what regulations may govern the development of, or the activities on, the particular parcel of land. Aside from the MPC-mandated local and county roles in the subdivision/land development review process (which would apply to any and all developments), portions of the Township, in particular the study area, are subject to a number of additional state and federal regulations, most of which govern environmental features relating to waterfronts and wetlands.

The following text addresses those regulations at the local, state, and federal levels which must be considered when contemplating development for the Tinicum waterfront. It should be noted that for more information on any of the following regulatory programs, it is best to contact the Delaware County Planning Department or one of the specific regulatory agencies mentioned in this study. An additional source of information, particularly as it relates to waterfront development, is the Delaware Valley Regional Planning Commission (DVRPC), which was instrumental in providing resource materials for this section. The Figure 1 flowchart contained herein was prepared by DVRPC. It was extracted from the "Waterfront Developer's Permit Handbook," a valuable resource prepared and distributed by DVRPC at the request of the Pennsylvania Coastal Zone Management Program.

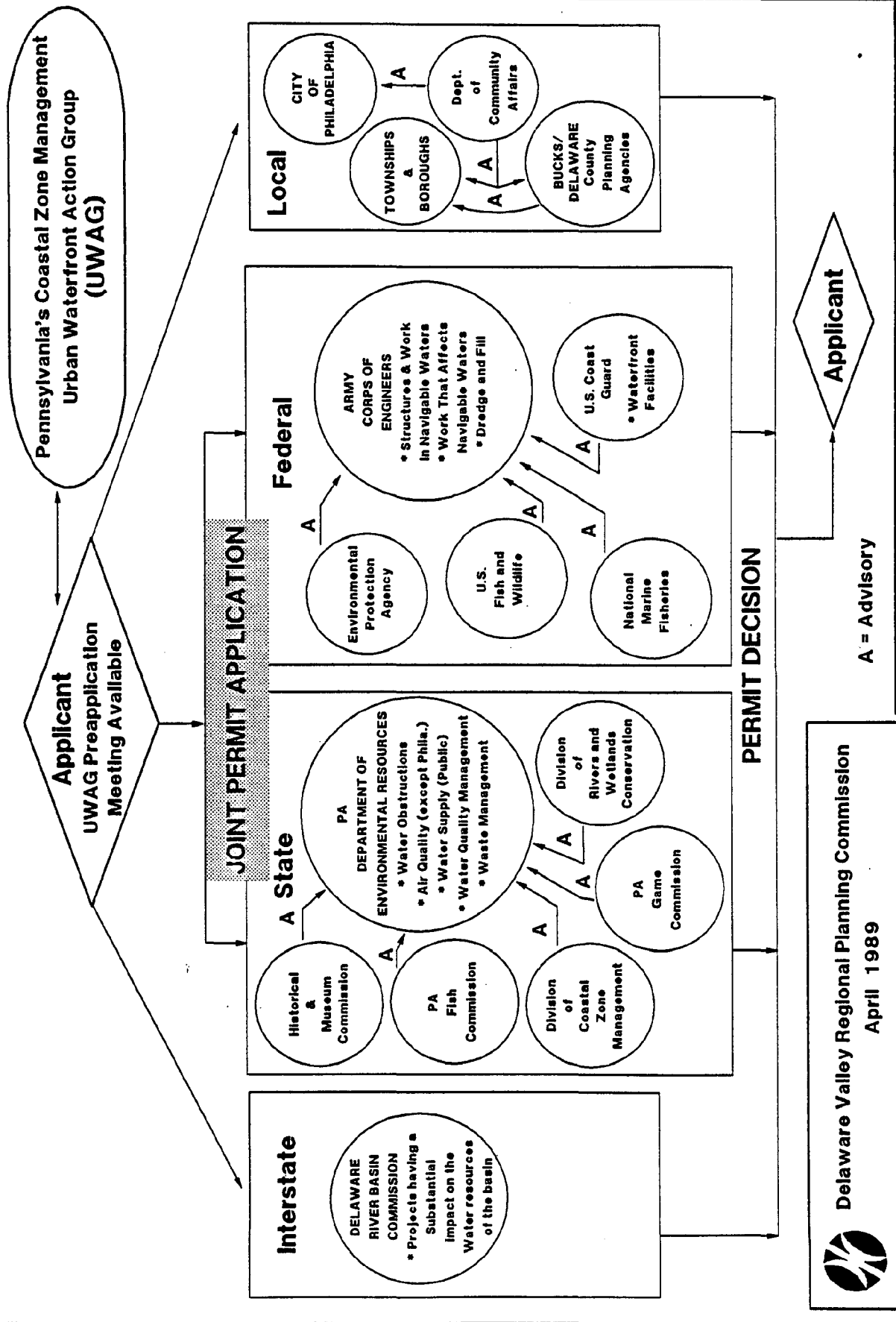
Local/County Land Development Reviews

Authority

The Pennsylvania Municipalities Planning Code (MPC), Act 247 of 1968, as amended, is the enabling legislation which for years has granted municipalities the right to:

"...plan their development and to govern the same by zoning, subdivision and land development ordinances, planned residential development and other ordinances, by official maps, by the reservation of certain land for future public purpose and by the acquisition of such land; to promote the conservation of energy through the use of planning practices and to promote the effective utilization of renewable energy sources; providing for the establishment of planning commissions, planning departments, planning committees and zoning hearing boards, authorizing them to charge fees, make inspections and hold public hearings; providing for mediation; providing for transferrable development rights; providing for appropriations, appeals to

FIGURE I **PENNSYLVANIA PERMIT PROCESS FOR WATERFRONT DEVELOPMENT**



courts and penalties for violations; and repealing acts and parts of acts.¹

On November 30, 1988, the Pennsylvania General Assembly passed Act 170. This legislation (which took effect on February 21, 1989) constitutes the first comprehensive update of the MPC since 1972. Although Act 170 addresses many of the same items/issues covered by Act 247, this legislation has strengthened the MPC through the revision of definitions and the granting of authority to establish review fees and provisions for infrastructure (water supply, sewer) improvements, as well as historic and natural features preservation. Other sections of the Act provide for changes in procedural matters.

General Process

As it now stands, the MPC requires all land developments (subdivisions of land, the improvement of one, two, or more contiguous lots for the purpose of two or more residential or non-residential buildings, or the allocation of land or space among two or more occupants such as with streets, open space condominiums, etc.) to undergo both local and county planning commission review processes. Although the ultimate authority to disapprove or grant approval (with or without conditions) to a development plan lies with the municipality, the MPC requires that counties review such plans for adequacy relative to local, state, and federal regulations. Local review is based on the same criteria.

Plans submitted for review can be at the sketch, preliminary, or final stage. Depending on the type of plan, the submission will undergo a different level of scrutiny. Generally speaking, the following is the level at which the various plans are reviewed:

- | | |
|------------------|---|
| Sketch Plan | - conceptual (relative to zoning
- fewer plan requirements) |
| Preliminary Plan | - compliance with zoning and
subdivision requirements
(emphasis on final design) |
| Final Plan | - should contain all items shown
on the preliminary plan as
well as any modifications
(recommended at the preliminary
plan review level) necessary
to grant approval to and
ultimately record the plan. |

¹ Pennsylvania Municipalities Planning Code, Act 247 of 1968, as amended.

Development plan submissions to Tinicum Township require seven copies of the plan. Current Township plan review fees are \$25 per lot, plus engineering fees. Fees for land developments not involving subdivision of land are based on the engineering costs associated with plan review. Development plan submissions to the Delaware County Planning Department (DCPD) must include three copies of the plan, a County plan review application, and the appropriate review fee as specified in the County's Fee Schedule (See Appendix H).

Under MPC regulations, municipalities have 90 days² to review development plans, act on those plans, and notify the applicant of its determination; counties have 30 days to review the same plans, the clock starting the day the municipality forwards the application to the County Planning Department. In the case of both local and county review deadlines, failure to review and respond to an application within the specified time period constitutes approval of the plan. (See Table 1 for a flowchart illustrating the local and County review processes.)

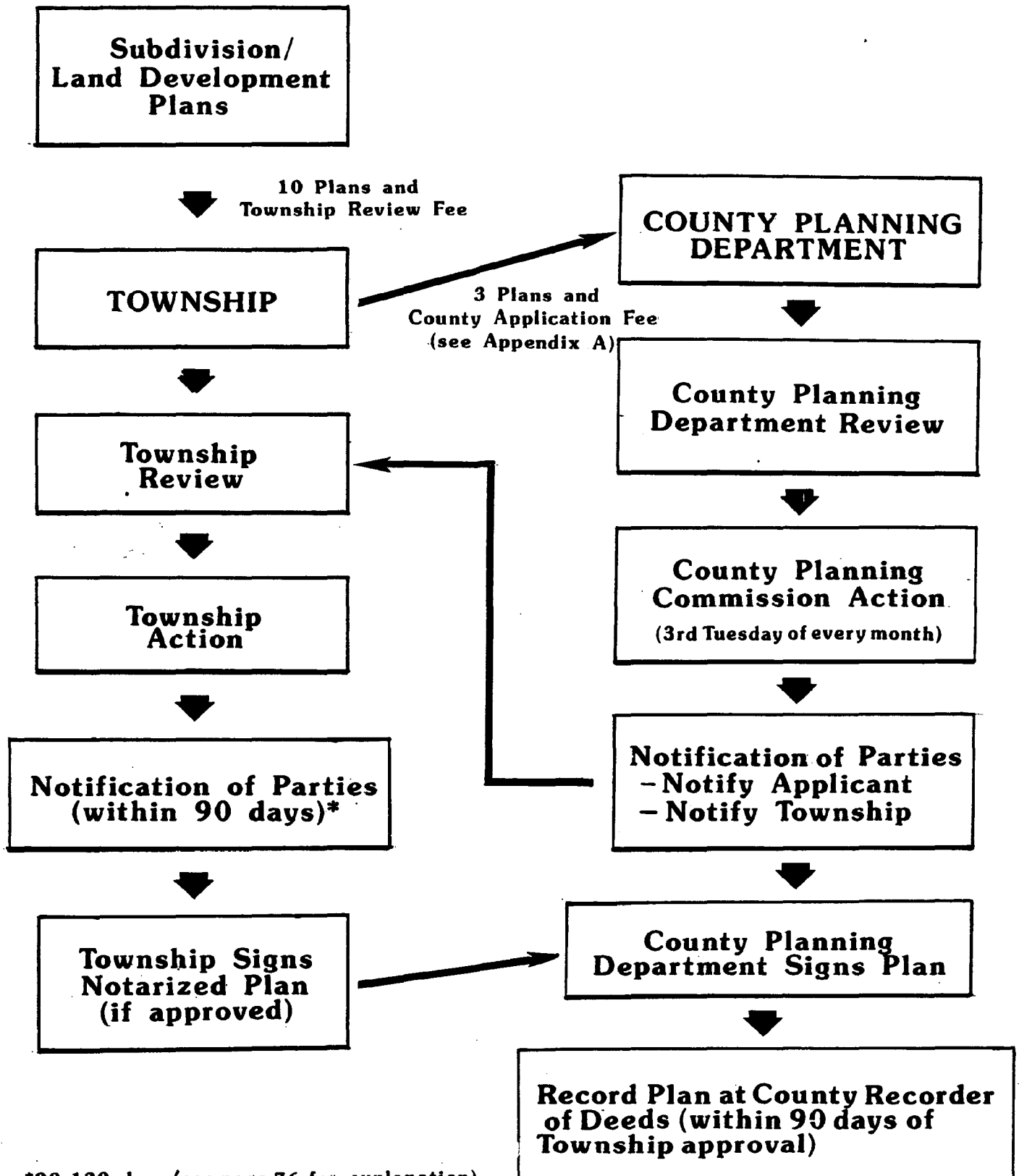
As stated previously, development plans are reviewed relative to their conformance with local (zoning and subdivision/land development) regulations. Nonconformance with zoning regulations is the most common reason for plan disapproval. Variances from zoning requirements may be granted by the local Zoning Hearing Board, but such relief is designed for hardship cases (physical land constraints, etc.) only. Although Delaware County Planning Commission review recommendations are considered advisory, many of the comments and suggestions made in County-level reviews are incorporated into local plan reviews.

Provided that the Township finds the applicant's proposal to be in compliance with all local regulations, the plan is granted approval. Such approval may be granted contingent upon satisfying additional requirements (such as submission of additional information, obtaining state and federal permits, provision of utilities, etc.).

Once final approval has been granted by the municipality (notification must take place within fifteen days), the plan is signed by both the municipality and the County. This plan (after having been notarized) is then taken to the County Office of the Recorder of Deeds for recording within 90 days of municipal approval.

² Note: the clock starts on the date of the regular meeting of the governing body or planning agency (whichever comes first). Should this meeting occur more than 30 days following the date of application, the 90 days is measured 30 days from the file date of the application.

**Figure 2 THE LAND DEVELOPMENT
REVIEW PROCESS**



*90-120 days (see page 76 for explanation)

State Regulations - Environmental

The Pennsylvania Department of Environmental Resources (DER) is the agency responsible for the management of all state-level environmental programs, including the issuance of any permits, licenses, certifications, etc. mandated by state environmental regulations. DER is comprised of a number of individual bureaus (and divisions), each of which is responsible for a different facet of resources management (e.g. Bureau of Dams and Waterway Management, Division of Waterways and Stormwater Management or Division of Rivers and Wetland Conservation, Bureau of Oil and Gas Management, etc.).

Although the state General Assembly enacted a number of its own environmental regulations, many of Pennsylvania's regulations are either mandated by or based upon similar federal regulations (e.g. air quality, hazardous waste, floodplains, wetlands, etc.). In many cases, the state and federal roles are intertwined (e.g. 401 Water Quality Certification is required from the state before issuance of federal wetlands permits). Other Pennsylvania regulations are state or project specific.

The following deals with several of DER's major environmental regulations which may relate to development along the Essington waterfront. It should be noted that regulations relating to development activities which have not been suggested for the study area (i.e. solid waste, mining, etc.) will not be discussed here.

Chapter 105 Regulations

The most important as well as the most inclusive body of regulations dealing with waterfront/waterway development in Pennsylvania is Chapter 105 (Dams Safety and Waterway Management Rules and Regulations), issued pursuant to Act 325 (Dam Safety and Encroachments Act of 1978). A copy of these regulations can be obtained by contacting the DER Bureau of Dams and Waterway Management or Bureau of Water Resources Management and their various divisions which administer the Chapter 105 program.

Chapter 105 is extremely important in that it addresses almost every issue associated with water-related and shore-line development (including wetlands). This means that almost any of the proposed activities for the study area, specifically, new piers, walkways, marinas, and even buildings and parking lots (if they involve the alteration of wetlands) will require permits from the State of Pennsylvania.

Permit reviews for water-based development are evaluated on the basis of the specific activity and the degree to which it may impact on the area. Such reviews are not per-

formed in a vacuum, however. A number of state agencies (not limited to those listed below) will receive a copy of the permit application and be asked to comment on the proposal's impacts. Although comments are advisory, they are given serious consideration when making a decision whether or not to issue a permit (and under what conditions). A copy of the regulations governing the review of permit applications can be found in Appendix I.

Agencies which have a review role in the state permitting process are as follows:

1. DER, Bureau of Dams and Waterway Management - Reviews applications for consistency with Chapter 105 regulations.
2. DER, Bureau of Water Resources Management, Division of Rivers and Wetland Conservation - Reviews applications for consistency with current Chapter 105 wetlands policies and impacts.
3. Pennsylvania Fish Commission - Reviews application for consistency with applicable laws.
4. Pennsylvania Game Commission - Reviews application for consistency with applicable laws.
5. DER, Bureau of Water Resources Management, Division of Coastal Zone Management - Reviews application for consistency with Pennsylvania's Coastal Zone Management Program policies.
6. Pennsylvania Bureau for Historic Preservation - (See State Regulations - Historic)

It should be noted that Chapter 105 regulations govern "submerged lands of the Commonwealth," and before granting a permit for piers or any other obstruction "in or over lands belonging to the Commonwealth," the applicant must first obtain "easement, right-of-way, license, or lease" to "occupy submerged lands of the Commonwealth." Such permission is relatively easy to obtain. For more information, check the Chapter 105 regulations.

Rare/Endangered Species

Although there are specific state regulations which govern the protection of rare and endangered species of plant and animal life, the initial review of proposals involving impacts to these "natural resources" will be performed as part of the wetlands review process under Chapter 105. It should be noted that a number of these rare and endangered species have been sighted in portions of Tinicum Township; therefore, the likelihood that they exist on study area parcels should be considered.

Floodplain Regulations

As stated in the background document, much of the study area lies within the 100-year floodplain. 100-year floodplains are regulated at three levels of government - federal, state, and local. Local regulations, which are required by the state, are, at a minimum, as strict as the state's regulations, (which are at least as strict as federal regulations). Although the federal government does not require municipalities to adopt local ordinances governing floodplains, in order for residents to be eligible for flood insurance such regulations must be in effect.

The most significant development consideration in the 100-year floodplain portions of the study area is the requirement that the lowest floor (including the basement) of new construction (and improvements to existing structures) be "elevated or designed and floodproofed to one foot above the base flood elevation" or if below one foot, be "watertight with walls substantially impermeable to the passage of water..." Structures and buildings placed on floodplain parcels are also to be constructed "so as to offer minimum obstruction to the flow of water and... be designed to have a minimum obstruction effect on the flow and height of floodwater." The storage of materials which are "buoyant, flammable, explosive, or injurious to human, animal or plant life..." are regulated such that they must be "elevated or designed and constructed to remain completely dry up to at least 1½ feet above the one-hundred year flood." For specific floodplain and floodproofing requirements, contact Tinicum Township.

When considering the prospect of new construction or improvements to existing facilities in the study area, it does not appear that the construction of piers, residences or other structures would encounter major problems as a result of the need to be floodproofed. The most significant constraint could be in terms of activities such as boat repair, refueling operations and the like because they may require the storage of large quantities of hazardous petroleum products (listed under the 18 chemical substances regulated by the Township ordinance). Depending on the specific activity proposed, a developer may need to investigate the need for compliance with special floodproofing standards.

State Regulations - Historic

Within the environmental permit review process for Chapter 105 permits or any other state or federal permit, there is an additional level of review which must take place by the Pennsylvania Bureau for Historic Preservation for projects involving properties either on or eligible for the National Register of Historic Places. While review of all projects affecting these historic resources is encouraged,

review is only required for those projects which involve the use of state or federal funds or for projects which are to receive rehabilitation tax credits issued under the Economic Recovery Tax Act (which covers rehabilitation of structures over 50 years old). Such reviews will evaluate the proposed rehabilitation scenario against the "Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings," available from the U.S. Department of the Interior, National Park Service, Preservation Assistance Division. Study area properties which may be subject to these historic resource reviews are the Lazaretto, Governor Printz State Park, and Corinthian Yacht Club.

For properties or other sites which may contain archaeological resources (such as the Corinthian property, Governor Printz State Park, and portions of Darby Creek and the Delaware River), the State of Pennsylvania may require a Phase I archaeological study (systematic shovel testing to a depth of eighteen inches). This type of study will be required before DER permits are issued; therefore, it is recommended that suspect areas be investigated as part of the preliminary development plan process. Should a site's archaeological resources be discovered once construction has started, the state may require mitigation (resulting in both time and funding delays).

Federal Regulations - Environmental

The U.S. Army Corps of Engineers is the federal agency responsible for the issuance of permits affecting navigable waterways and wetlands. The authority for the two principle sets of regulations governing the issuance of Corps permits are Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Federal Clean Water Act. Both sets of regulations are available from the local Corps of Engineers office in Philadelphia.

As with state environmental permits, the review of federal permit applications is done on the basis of advisory comments from a number of federal agencies. These agencies are as follows:

1. Environmental Protection Agency (EPA) - Reviews applications for consistency with federal environmental regulations. (Note: EPA has veto power over Corps permits).
2. U.S. Fish and Wildlife Service - Reviews applications for the potential impacts on fish and wildlife resources, particularly in wetland areas.
3. National Marine Fisheries Service - Reviews applications for potential impacts relating to fisheries resources.

4. U.S. Coast Guard - Reviews applications for potential impacts on navigation.

Section 10 of the Rivers and Harbors Act of 1899

This Act governs obstructions in "navigable waters of the United States" or waterways which impact on the same. Such obstructions include piers, bulkheads, etc. The Section 10 regulations also govern dredging, fill or other work done in navigable waters. Almost all of the activities proposed for the waterfront parcels in the study area (in particular, shoreline stabilization, piers, bulkheads, walkways, etc.) will require a Section 10 permit.

Section 404 of the Clean Water Act

This set of regulations governs the placement of dredged or fill materials into "waters of the United States." These are the federal regulations which govern wetlands because the definition for waters of the United States includes wetlands. Since much of the study area may be considered a wetland, serious consideration should be given to the possible need for a Section 404 permit for almost any activity in the study area which may involve filling (such as the construction of roads, buildings, parking, piers, etc.).

Review of permits under Section 404 are based on several factors which include public and private need, other available alternatives, etc. Given the case by case nature of review for these permits, it is best to discuss with the Corps any development proposals which may fall under these regulations.

Section 401 of the Clean Water Act

This section of the Clean Water Act requires a developer to obtain water quality certification before the issuance of any federal permit. Since this certification is performed at the state level by DER, a developer should check with the state before applying for any federal permits.

Other Agencies

Other agencies which may be involved in the development proposal and permit review processes are as follows:

1. Delaware River Basin Commission - Reviews proposals for all projects which may have an impact on water resources in the Delaware River basin (such as water diversions and withdrawals, draining and filling of marshes, floodplain encroachments, etc.)
2. Delaware River Port Authority - Reviews proposals affecting port development.

Joint Permit Application

In order to streamline the permitting process at both the state and federal levels, the regulatory agencies have developed a joint permit application (see Appendix J). This application may be used for all state and federal permits mentioned previously. A full copy of this application can be obtained from any state or federal regulatory agency.

Urban Waterfront Action Group

In 1980, the Urban Waterfront Action Group (UWAG) was created for the purpose of guiding developers through the waterfront development review process. This program, which is sponsored by the Pennsylvania Coastal Zone Management Program and implemented by the Delaware Valley Regional Planning Commission, is designed to help resolve permitting issues long before the developer has expended a great deal of time and expense on project development.

Once a month, DVRPC holds pre-permit conferences at which time developers may present preliminary development proposals to a panel of representatives from the federal, state, and local (County) permitting and advisory agencies. The proposals are discussed in terms of merit, need for permits, permitting process and possible needed mitigation measures. Although the recommendations made by the UWAG are advisory only, it is in the best interest of the developer to heed the warnings and recommendations made at these conferences because, more than likely, the same recommendations may be made during the permit review process. A list of UWAG participants (extracted from the Waterfront Developers Permit Handbook) can be found in Appendix K).

For more information about the UWAG, to schedule a pre-permit conference, or to order a copy of the Waterfront Developer's Permit Handbook, contact the Delaware Valley Regional Planning Commission.

APPENDIX

A

APPENDIX A

SECTION 61-13

GENERAL REGULATIONS

These regulations shall be in force throughout the Township, as applicable to the particular zoning districts. They supplement the requirements which are listed in each zoning district.

61-13.A. OFF-STREET PARKING, LOADING, UNLOADING, AND ACCESS.

Each use in the Township shall provide sufficient off-street parking, loading, unloading and access to serve its operations. Design standards are found in the Subdivision and Land Development Ordinance, Chapter 48A of the Township Code.

61-13.A.1. Off-Street Parking.

- a) Unless otherwise specified, parking shall be required on the particular lot which is generating the parking requirement. Provision for shared parking across subdivision lines may be allowed in non-residential land uses provided that the overall development being served by this shared parking meets the overall parking requirements generated by this development.
- b) Parking requirements are expressed in terms of parking spaces for motor vehicles gauged to the specific land use. Refer to Chapter 48A of the Township Code for dimensional requirements of the spaces. Unless otherwise specified, gross floor area of the development shall be used to determine the necessary number of parking spaces.
- c) Table 3, page 93, lists the specific parking requirements for non-residential development. Residential parking standards are found within each residential zoning district.
- d) Where the computation of required parking spaces results in a fraction of a space, only the fraction of one-half or more shall be counted as one additional space.

61-13.A.2. Off-Street Loading and Unloading.

Paved off-street loading and unloading area, sufficient to meet the requirements of use and with proper access to a public street, shall be provided. Particular care shall be required for oversize motor vehicles and trailers. No loading area shall count toward a required parking space. Loading and unloading facilities shall be located on the same site as the use served, except in the case of multi-tenant office and industrial buildings and shopping centers. Table 4, page 95, lists the specific loading and unloading requirements. Off-street loading areas are further regulated in the Subdivision and Land Development Ordinance, Chapter 48-A of the Code of Tinicum Township.

61-13.B. ACCESSORY USES AND/OR STRUCTURES.

61-13.B.1. Accessory uses and/or structures shall be permitted, subordinate and incidental to principal uses and/or structures on the same lot.

61-13.B.2. Accessory structures shall not be erected within the front yard.

61-13.B.3. Where an accessory use is located within a main or principal building, it shall be subject to all regulations of this Ordinance applicable to the principal use.

61-13.B.4. In no instance shall an accessory building be located within a dedicated easement or right-of-way.

61-13.B.5. Any private accessory garage, toolshed and/or household storage structure facing an alley, driveway, passageway or side street shall have an entrance at least three (3) feet from the property line. In any event, the door or doors shall not swing across the property line.

61-13.C. SWIMMING POOLS.

61-13.C.1. Regulations for private swimming (both in-ground and out-of-the-ground) and wading pools are provided in the Swimming Pool Ordinance, Chapter 49 of the Township Code. Public swimming pools shall also comply with these regulations.

- 61-13.C.2. Private swimming pools are accessory to the principal use of a lot, and shall conform to the requirements of accessory structures.
- 61-13.C.3. No private swimming pool shall be constructed closer than five (5) feet to any side property line, eight (8) feet to any rear property line or eight (8) feet to any dwelling or building. Private swimming pools are prohibited in the front yard.
- 61-13.D. FENCING.
- 61-13.D.1. In all districts, no fence shall be erected or installed to a height of more than four (4) feet in the front yard. For side and rear yards, no fence shall exceed eight (8) feet in height. The exception to the above requirements shall be fences surrounding playing fields or courts, which may have a height not to exceed twelve (12) feet.
- 61-13.D.2. All fences shall be installed within the boundaries of the property.
- 61-13.D.3. Fencing shall be required to surround swimming pools. Fencing shall be at least six (6) feet high for in-ground pools and forty-two (42) inches high for out-of-the-ground pools.
- 61-13.D.4. Prior to the installation of any fence, a permit shall be required, to be issued by the Code Enforcement Officer.
- 61-13.E. BUFFERING AND LANDSCAPING.
- 61-13.E.1. Industrial and commercial uses shall provide buffering along the district boundaries between themselves and all Residential Districts. Multi-family residential uses shall provide buffering between themselves and all other Residential Districts. Furthermore, buffering shall be required within specific districts as noted in the appropriate districts, to separate various developments from each other.
- 61-13.E.2. The buffer line shall be measured from the district boundary line in cases where the development is contiguous to the district line; from the nearest street line where a street serves as the district boundary line; or from the property line, in cases where the development does not abut either a district boundary line or that part of the development which has street frontage.

- 61-13.E.3. The buffer depth may be part of the required side or rear yards. In cases of conflict, the larger yard requirements shall apply.
- 61-13.E.4. The buffer area shall consist of an all-season vegetative treatment landscaped and maintained on a regular basis. Buffer areas typically will include grass, ground cover, shrubs and trees. Planted visual screens shall be that part of the buffer area devoted exclusively to shrub and tree plantings. Maximum advantage shall be taken to keep existing healthy shrubs and trees. If the site is naturally wooded or covered by flowing or standing water, it may continue in its natural state.
- 61-13.E.5. Buffering shall be designed so that the requirement to meet performance standards (Section 61-15 of this Ordinance) can be partially achieved by this action. Earth berming may also be used as part of the design.
- 61-13.E.6. The open space area of the site not part of the buffer requirements shall be landscaped with an all-season vegetative cover.
- 61-13.E.7. No structure, manufacturing or processing activity; storage of materials; or parking shall be permitted in the buffer area.
- 61-13.E.8. Non-residential district buffering standards are set forth in Table 5, page 96. Residential buffer requirements are listed in each residential district.
- 61-13.F. LAND SUITABILITY.
- 61-13.F.1. Protection.
- Land shall be environmentally suitable for development, in order to protect the public health, safety and welfare. This requirement is especially necessary in development or redevelopment of former industrial sites, which potentially may contain industrial contaminants from previous land uses.
- 61-13.F.2. Studies and Cleanup.
- Hydrogeological studies shall be required for known former or current industrial land use sites. The United States Environmental Protection Agency and/or the Pennsylvania Department of Environmental Resources are the agencies with the authority to order any site

clean up. The Township Engineer shall review subdivision and land development plans for land suitability, and advise the Township of the need to invoke this subsection, as circumstances warrant. The applicant shall be responsible for paying all necessary legal and engineering costs.

61-13.G.

FLOODPLAINS AND WETLANDS.

61-13.G.1.

The Federal floodplain protection and insurance program is applicable in the Township. Under the auspices of the National Flood Insurance Program, the Tinicum Flood Insurance Rate Map (dated May 1, 1980) indicates various conditions applied to proposed development. A copy of this map may be reviewed at Town Hall. All structures, land areas and/or premises which are located in areas identified as floodplain are regulated by the Township Floodplain Ordinance, No. 527, as amended, contained in Chapter 20A of the Township Code.

61-13.G.2.

Federal and State wetlands laws and regulations pertain to the sizeable wetlands areas located in the Township. The Federal Clean Water Act, Section 404; and the Pennsylvania Dam Safety and Encroachments Act, Chapter 105, include the pertinent requirements for land use in wetlands areas.

61-13.H.

BASEMENTS.

Basements for the purposes of sleeping quarters shall be prohibited. Basement area for heating, mechanical or similar equipment shall be permitted.

61-13.I.

AIRPORT HEIGHT RESTRICTIONS.

61-13.I.1

Federal requirements govern the uses and height requirements in lands adjacent to airports. The Zoning Regulations for the Philadelphia International Airport, adopted by the Joint Airport Zoning Board for the City of Philadelphia and Delaware County on July 26, 1977, are applicable to Tinicum Township. Where there exists a conflict between these regulations and the Township Zoning Ordinance, the more stringent limitation or requirement shall govern and prevail. These provisions, derived from a federal model airport zoning ordinance, include the following regulations, among others:

- 61-13.I.2. Airport areas, including approach, transitional, horizontal and conical areas.
- 61-13.I.3. Airport zone height limitation with reference to the air space above the airport.
- 61-13.I.4. Use restrictions.
- 61-13.I.5. Nonconforming uses.
- 61-13.I.6. Permits, with applicant required to apply to Tinicum Township for permits needed within the Township portion of the airport.
- 61-13.I.7. Administration and enforcement.

A copy of these regulations shall be available for review at the Township Building. Where there exists a conflict between the Joint Airport Zoning Board regulations and the Township Zoning Code, the more stringent limitation or requirement shall govern and prevail.

- 61-13.J. SATELLITE DISH ANTENNAS.
- 61-13.J.1. Satellite dish antennas shall be considered accessory structures and uses, and shall comply with those provisions of this Ordinance.
- 61-13.J.2. In R-1 and R-2 Districts, roof-mounted satellite antennas are only permitted where a ground mount cannot obtain a usable satellite signal.
- 61-13.J.3. Either roof-mounted or ground-based satellite dish antennas shall be permitted in all other districts. Satellite dish antennas shall be prohibited in the front yard.
- 61-13.J.4. No more than one satellite dish antenna shall be permitted on a lot, and its use shall be limited to that lot.
- 61-13.J.5. Every satellite dish antenna shall be adequately grounded for protection against a direct strike of lightning.
- 61-13.J.6. Every ground based satellite dish antenna shall be buffered by fencing or an all-season vegetative planting, not to obstruct the functioning of the antenna.

- 61-13.J.7. A Township permit shall be obtained prior to installation. For roof-mounted installation, the application must be accompanied by specific mounting and stress analysis, certified by a professional engineer.
- 61-13.J.8. Satellite dish antenna design and installation shall comply with all other Township, State and Federal requirements.
- 61-13.K. STORAGE.
- 61-13.K.1. No long-term storage or parking of disabled, partially dismantled or junked vehicles shall be permitted in unenclosed and unbuffered spaces. Vehicles shall be considered to include motor vehicles (cars, trucks, campers and so forth), boats, planes and any other vehicles. Long-term storage or parking shall commence upon the expiration of thirty (30) consecutive days. In any one (1) calendar year.

The parking or storage of recreational vehicles within the front yard of any lot or within any public right-of-way shall be limited to a maximum of thirty (30) consecutive days in any one (1) calendar year.

SECTION 61-14

SIGN REGULATIONS

61-14.A. PURPOSE.

Any sign hereafter erected or maintained shall conform with the provisions of this Section and any other ordinance or regulations of the Township of Tinicum relating thereto.

61-14.B. GENERAL REGULATIONS AND PROCEDURES.

The following regulations shall be observed in all districts, except for in the Business Center District (see Section 61-14.I.) and in the Planned Commercial Industrial District (see Section 61-14.J.).

61-14.B.1. No sign, other than exempted signs, (see Section 61-14.G. of this Ordinance), shall be erected without first obtaining a sign permit from the Code Enforcement Officer.

61-14.B.2. A permit shall be required prior to the alteration of any sign.

61-14.B.3. Application for permits shall be made to the Township on such forms as may be furnished by the Township. Each application shall contain all information necessary to ascertain whether the proposed erection or alteration complies with the provisions of this Section. Such information as size, type, location and name of person responsible for the sign shall be included on said application.

61-14.B.4. No permit shall be issued until the Code Enforcement Officer has certified the proposed sign or alteration to be in compliance with the provisions of this Ordinance.

61-14.B.5. Permit application for signs larger than eight (8) square feet in size shall be accompanied by a plan, drawn to scale, showing the design, size, and location of the sign with respect to the building.

61-14.B.6. Plans for free standing signs which exceed twenty (20) square feet in size shall be subject to review and approval by the Township Commissioners.

61-14.B.7. No sign other than exempt signs shall be erected within or over a public right-of-way

except that projecting signs (Section 61-14.E. below), when authorized by this Ordinance, may overhang a public or private sidewalk, provided that the length of the projection over the right-of-way is not more than six (6) feet or one third (1/3) the width of the sidewalk, whichever is less. The Board of Commissioners may approve the hanging of temporary banner signs over a public street.

61-14.B.8. No sign shall be erected that is of such character, form or shape as to confuse or dangerously distract the attention of the operator of a motor vehicle on a public street.

61-14.B.9. All signs other than political and other exempt signs shall be erected on the same lot as the use to which it pertains.

61-14.B.10. No roof signs, vehicle signs, permanent sidewalk, sandwich or "A" frame signs, animated signs other than time and temperature signs, or signs that emit smoke, vapor, or noise shall be permitted.

61-14.B.11. No sign shall be printed, pasted, or placed on any tree, telegraph, electric light, or public utility pole.

61-14.B.12. All signs shall be of durable, all-weather material capable of withstanding a windspeed of 100 miles per hour. Free standing signs shall be supported by posts or pylons of concrete, steel, treated wood, or similar materials. No additional bracing or guide wire is permitted. Non-rusting hardware shall be used with all signs.

61-14.C. MAINTENANCE OF SIGNS.

61-14.C.1. All signs shall be kept in a proper state of repair.

61-14.C.2. If, in the opinion of the Code Enforcement Officer a sign has become dilapidated, he shall notify the owner or the lessee of the property, or whosoever caused the sign to be erected or who through sale or lease has assumed responsibility for the sign, of these dilapidated conditions, and shall advise the owner or lessee to correct the conditions within thirty (30) days or to appeal the decision of the Code Enforcement Officer to the Zoning Hearing Board within the same time period.

- 61-14.C.3. If, after thirty (30) days the condition has not been corrected, and the notice has not been appealed, the Code Enforcement Officer shall cause the dilapidated sign to be removed at the expense of the owner or lessee.
- 61-14.C.4. If the Code Enforcement Officer determines that the condition of the sign poses an imminent danger to the public safety, he may order the sign removed immediately. The owner or lessee shall have a right of appeal after the fact to the Zoning Hearing Board.
- 61-14.D. REGULATIONS GOVERNING FREESTANDING SIGNS.
- 61-14.D.1. Freestanding signs, when permitted by this Ordinance, shall not exceed one such sign per one thousand (1,000) feet of street frontage per tract or parcel regardless of the number of establishments occupying said tract or parcel. Directory signs, which include a variety of signs for different businesses on the same structure, shall be permitted in this fashion.
- 61-14.D.2. Each freestanding sign shall be erected in a manner and location so that pedestrian and vehicular circulation will not be impeded.
- 61-14.D.3. Freestanding signs shall not exceed a size of three hundred (300) square feet.
- 61-14.D.4. No freestanding sign shall exceed a height of twenty (20) feet.
- 61-14.D.5. A freestanding sign and a projecting sign shall not be utilized together to identify the same establishment on the same street frontage unless the freestanding sign collectively denotes a number of uses in a shopping center, pedestrian mall, or like establishment.
- 61-14.E. REGULATIONS GOVERNING PROJECTING SIGNS.
- 61-14.E.1. Projecting signs, including supportive framework, shall project not more than six (6) feet from the face of the building. No single dimension of the face of any projecting sign shall exceed four (4) feet.
- 61-14.E.2. No part of the sign shall be less than eight (8) feet nor more than twelve (12) feet above the sidewalk.
- 61-14.E.3. No more than one projecting sign per establishment per one thousand (1,000) feet of street frontage shall be permitted.

61-14.E.4. Window signs, unless further restricted by district regulations, shall not exceed twenty (20) percent of the glass area of the window in which placed.

61-14.E.5. All signs referring to uses located in the same building or group of architecturally related buildings shall be of similar design, and shall use coordinated styles of lettering.

61-14.F. REGULATIONS GOVERNING TEMPORARY SIGNS.

61-14.F.1. Freestanding signs and sidewalk or sandwich signs shall have a sign area of not more than nine (9) square feet.

61-14.F.2. Banners shall not exceed one hundred (100) square feet.

61-14.F.3. Wall signs shall not exceed forty (40) percent of the signable area or ten (10) percent of the first floor facade, whichever is less.

61-14.F.4. Window signs shall not exceed twenty (20) percent of the glass area.

61-14.F.5. Temporary projecting signs are permitted only upon marquees especially designed to receive such temporary signs as in the case of a theatre.

61-14.F.6. No temporary signs, when considered in conjunction with existing permanent signs, may exceed the permissible area for signs allowed in the district.

61-14.F.7. All temporary signs, other than those permitted on marquees, shall require a permit valid for no more than thirty (30) days but renewable upon application to the Code Enforcement Officer one time each calendar year.

61-14.G. EXEMPT SIGNS.

The following signs are exempt from the General Regulations (Section 61-14.B.), district requirements, the need to secure permits, and from the allowable sign area requirements:

61-14.G.1. Decorations for a recognized, officially designated holiday provided they do not create traffic or fire hazard.

61-14.G.2. Official signs.

- 61-14.G.3. Directional signs not exceeding two (2) square feet.
- 61-14.G.4. Memorial or historical markers when approved by the Board of Commissioners and when not more than twelve (12) square feet in area.
- 61-14.G.5. Non-illuminated nameplate signs not exceeding one-hundred eight (108) square inches in size provided that only one (1) such nameplate shall be exempted per parcel of land.
- 61-14.G.6. Political signs provided they do not exceed six (6) square feet and are removed within seven (7) days after an election.
- 61-14.H. NONCONFORMING OR ABANDONED SIGNS.
- 61-14.H.1. Regulation of Nonconforming Signs.

Nonconforming signs shall be removed, replaced, repaired, or otherwise brought into conformity with the provisions of this Ordinance in accordance with the following schedule:

- a) Temporary sidewalk, sandwich or "A" frame signs, movable freestanding signs, banners, streamers, pennants, and similar signs shall be abated or removed within sixty (60) days of the enactment of this Ordinance.
- b) Signs painted on buildings, walls, or benches, shall be abated or removed within two (2) years of the date of enactment of this Ordinance.
- c) All other signs shall be abated or removed within five (5) years of the date of enactment of this Ordinance.
- d) No nonconforming sign may be altered, repaired, or replaced unless the altered, repaired, or new sign is in conformity with this Ordinance.

61-14.H.2. Registration of Nonconforming Signs.

For the purpose of regulation and enforcement, the Code Enforcement Officer shall make and maintain a list of nonconforming signs in the Township, together with the date of the sign permit issued. A fee may be charged for the registration of such signs. This list shall

be filed in the Office of the Township Secretary and used to assure proper statement of nonconforming signs as provided herewith.

61-14.H.3. Regulation and Types of Abandoned Signs.

No person shall maintain or permit to be maintained on any premises owned or controlled by him, a sign that has been abandoned. Any such abandoned sign shall be promptly abated by the owner or person controlling the property. Any sign for which the purpose is past, whether through change of business, change of ownership, or change of name, shall be considered an abandoned sign.

61-14.I. SIGN REGULATIONS IN THE BCD - BUSINESS CENTER DISTRICT.

61-14.I.1. Freestanding Signs.

- a) Not more than one (1) freestanding sign identifying or advertising the users and not more than two (2) freestanding signs identifying the Business Center District shall be erected for each street upon which the Business Center District has frontage, provided that:
 - 1) No sign shall exceed forty-two (42) feet in height above the grade of the center line of the nearest public roadway.
 - 2) The size of any sign shall not exceed six hundred (600) square feet.
 - 3) No sign shall have a distance between the faces thereof in excess of six (6) feet.
 - 4) All signs shall be set back at least fifteen (15) feet from any street or highway right-of-way line.
- b) In addition to the freestanding signs provided for in Subsection I.1.a) above, two (2) freestanding signs shall be permitted at each access drive into the Business Center District, provided that:
 - 1) The total area of either or both signs combined shall not exceed six hundred (600) square feet.

- 2) No sign shall exceed fifteen (15) feet in height above the grade of the center line of the nearest public roadway. In the interest of public safety, a sign of greater height may be permitted by vote of the Township Commissioners.
- 3) No sign shall exceed thirty (30) feet in length.

61-14.I.2. Exterior Signs.

- a) Each occupant of a building containing thirty thousand (30,000) square feet or less of floor space and having direct public access to a parking area shall be permitted two (2) signs on the exterior of said building, provided that:
 - 1) The signs shall be attached to the wall of the building or be free-standing.
 - 2) The signs shall be located in the immediate vicinity of said occupant's direct public access to the parking area.
 - 3) The size of any signs shall not exceed fifty (50) square feet, and the length thereof shall not exceed ten (10) feet.
- b) Each occupant in a building having more than thirty thousand (30,000) square feet of floor space but less than one hundred thousand (100,000) square feet of floor space shall be permitted two (2) signs on the exterior of said building, provided that:
 - 1) The signs shall be attached to the wall of said building or be free-standing.
 - 2) The size of any signs shall not exceed one hundred (100) square feet, and any sign shall not have a length greater than twenty-five (25) feet.
- c) Each occupant of a building containing one hundred thousand (100,000) square feet or more of floor space shall be per-

mitted signs on the exterior of said building, provided that:

- 1) Not more than two (2) signs shall be permitted on each side of said building.
- 2) Not more than four (4) signs shall be permitted for any one (1) occupant.
- 3) The signs shall be attached to the wall of the building or may be freestanding.
- 4) The size of any sign shall not exceed two hundred seventy-five (275) square feet, and the length thereof shall not exceed forty (40) feet.

61-14.I.3. General Provisions.

- a) No sign shall be illuminated except by lighting which is concealed, indirect, or attached to the sign itself.
- b) At each public entrance to a multi-occupancy building, there shall be permitted one (1) directory sign on the exterior of the building identifying the occupants of said building, provided that:
 - 1) The sign shall be attached to the wall of the building or shall be freestanding.
 - 2) The sign shall be located in the immediate vicinity of the public entrance to said building.
 - 3) The size of any sign shall not exceed two hundred (200) square feet.
- c) Where "entrance," "exit," "pickup" and "loading area" signs are desired, such signs shall be permitted on application to the Code Enforcement Officer. No sign shall be greater than fifty (50) square feet in area.
- d) Signs shall be permitted on the interior of any single- or multi-occupancy building.

- e) Except for the modifications contained herein as to size and location of signs, the provisions of the Township Sign Ordinance, Chapter 47 of the Township Code, and the other provisions of Section 61-14 herein, shall apply.

61-14.J. SIGN REGULATIONS IN THE PCI - PLANNED COMMERCIAL/INDUSTRIAL DISTRICT.

61-14.J.1. Freestanding Signs.

- a) All freestanding signs in the Planned Commercial/Industrial District shall be on-premises signs which identify the uses or activities of the lot on which it stands.
- b) In the case where a lot is occupied by more than one building or more than one tenant, each tenant may be identified on a directory sign. The combined area, used by all tenants, on a directory sign shall be considered one (1) sign.
- c) Not more than one freestanding sign and not more than one directory sign shall be displayed for each one thousand (1,000) feet of each street on which a lot has frontage.
- d) No freestanding sign shall exceed fifty (50) feet in height above the grade of the centerline of the nearest public roadway.
- e) The total surface area of any freestanding sign shall not exceed eight hundred (800) square feet.
- f) No sign shall have a distance between the faces thereof in excess of six (6) feet.
- g) All freestanding signs shall be set back at least fifteen (15) feet from the nearest street right-of-way line.
- h) No freestanding sign shall exceed thirty (30) feet in length.

61-14.J.2. Exterior Signs.

- a) On any one (1) building, the aggregate area of signs attached to a wall or the roof and visible from and principally

facing any one (1) property line of the lot on which it is located shall not exceed fifteen (15) percent of the exterior wall area.

- b) Not more than two (2) signs shall be permitted on each side of each building.
- c) Not more than four (4) signs shall be permitted for any one (1) occupant.

SECTION 61-15

PERFORMANCE STANDARDS

61-15.A. PURPOSE.

All uses, processes and activities established after the effective date of this section shall comply with the following performance standards. The purpose of these standards is to provide for off-site protection from the following types of impacts. These impacts most frequently are generated by industrial, commercial or business activities. Standards established by the Pennsylvania Department of Environmental Resources or the United States Environmental Protection Agency shall apply where those standards are more restrictive than the standards set forth below.

61-15.B. SPECIFIC PERFORMANCE CRITERIA.

The following performance parameters or elements shall be considered, individually and in combination, for land uses throughout the Township. Specialized testing procedures are necessary in order to determine impacts. Performance thresholds are given for each element.

61-15.B.1. Noise.

- a) The noise or sound level of any operation (other than the operation of motor vehicles, railroad trains, airplanes or helicopters; operations involved in the construction or demolition of structures, emergency alarm signals or time signals) shall not exceed the decibel levels as stated below.
- b) Noise levels shall be measured at the property line or lines which abut the nearest dissimilar land use.
- c) A sound level meter having an A-weighted filter, constructed in accordance with specifications established by the American National Standards Institute, shall be used. Continuous noise shall be measured using the slow response of the sound level meter. Impact noise shall be measured using the fast response.
- d) The maximum permissible sound levels, measured in dB(A), are as follows:

Sound measured at
property line of
the following adjacent
land use:

Continuous Slow
Meter Response

Impact Fast
Meter Response

Residential
Commercial
Industrial

50
60
70

60
70
80

- e) Between the hours of 7:00 p.m. and 7:00 a.m., the permissible sound levels in a residential land use shall be reduced by five (5) decibels.

61-15.B.2. Vibrations.

- a) Vibration, the periodic displacement or oscillation of the earth, shall be measured at or beyond any lot line adjacent to the source of the vibration, and such measurements shall not exceed the standards so designated.

- b) The instrument used for these measurements shall be a three component measuring system capable of simultaneous measurement of vibration in three mutually perpendicular directions, or by a similar or improved instrument as specified by the appropriate professional organization. Vibration shall be expressed as particle velocity, and shall be computed by the following formula:

$$P.V. = 6.28 F \times D$$

where P.V. = Particle velocity, inches per second

F = Vibration frequency, cycles per second

D = Single amplitude displacement of the vibration, inches

- c) The maximum particle velocity shall be a vector sum of the three individual components recorded, not to exceed the following values:

P.V.
Lot Line of Adjacent
Non-Residential Land Use

0.10

P.V.
Lot Line of Adjacent
Residential Land Use

0.02

Where vibration is produced as discrete impulses, and such impulses do not exceed

a frequency of 100 per minute, then the above values may be multiplied by two (2).

61-15.B.3. Air Pollution.

Ambient Air Quality Standards have been established by the Commonwealth of Pennsylvania and are enforced by the Regional Air Pollution Control Board. However, to govern situations of a local nature, the following additional regulations are provided:

a) Smoke.

- 1) For the purpose of grading the density or equivalent opacity of smoke, the Ringelman Smoke Chart as published by the United States Bureau of Mines shall be used.
- 2) Smoke emitted from any source shall not be of a shade darker than No. 1 on the Ringelman Smoke Chart, except that smoke of a shade not darker than No. 2 on the Ringelman Smoke Chart may be emitted for not more than four minutes in any six hour period.

b) Dust and Particulates.

- 1) The total emission rate of dust and particulate matter from all vents, stacks, chimneys, flues or other openings for any process, operation, or activity shall not exceed the levels set forth below:

The emission rate of particulate matter in pounds per hour from any single stack, vent, chimney, or flue, shall be determined by selecting a continuous four (4) hour period which will result in the highest average emission rate;

- 2) Particulate matter emission from materials or products subject to becoming windborne shall be kept to a minimum by paving, oiling, wetting, covering or other means, so as to render the surface wind resistant. Such sources include vacant lots, unpaved roads, yards

and storage piles of bulk materials such as coal, sand, cinders, slag, sulfur, etc.

- 3) For industrial land uses, the maximum emission rate of dust and particulate matter from all stacks, vents, chimneys or flues combined, shall be 0.5 pounds per hour per acre of lot area.

c) Odor.

- 1) There shall be no emission of odors into the atmosphere in such quantities as to be offensive at any point on or beyond the lot boundary line within which the operation is situated.
- 2) Odor thresholds shall be measured in accordance with the "Standard Method For Measurement of Odor in Atmosphere" (dilution method) ASTM-57 or its equivalent.

d) Other Air Pollutants.

The Ambient Air Quality Standards for the Commonwealth of Pennsylvania shall be the guide to the release of airborne toxic materials across lot lines. Where toxic materials are not listed in the Ambient Air Quality Standards, the release of airborne toxic matter shall not exceed 1/30 of the Threshold Limit Value adopted by the American Conference of Governmental Industrial Hygienists beyond the district boundary line.

61-15.B.4. Heat.

No heat from any source shall be sensed at the property line of that source to the extent of raising the temperature of air or materials more than one degree Fahrenheit.

61-15.B.5. Glare.

- a) Glare from any use or activity shall be so limited that direct or indirect light from the source shall not cause illumination in excess of 0.5 footcandles when measured at any window of the nearest residential property.

- b) . Such light shall not create a nuisance or hazard along the property line.

61-15.B.6. Fire and Explosion.

All activities or storage involving flammable and explosive materials shall be provided with adequate safety and fire fighting devices in accordance with the Fire Prevention Code of the Township of Tinicum.

61-15.B.7. Radioactive Materials.

The handling of radioactive materials, the discharge of such materials into air and water, and the disposal of radioactive wastes shall be in conformance with the regulations of the Nuclear Regulatory Commission (NRC), as set forth in the United States Code, Title 10, Chapter One, Part 20 - Standards for Protection Against Radiation, as amended; and all applicable regulations of the Commonwealth of Pennsylvania.

61-15.B.8. Non-Radioactive Liquid or Solid Wastes.

There shall be no discharge at any point into any public or private sewage disposal system or stream or into the ground of any liquid or solid materials except in accordance with the Laws and Regulations of the United States, the Commonwealth of Pennsylvania, and the Township of Tinicum.

61-15.B.9. Electrical and Electromagnetic Interference.

No use shall cause electrical or electromagnetic disturbances that would adversely affect the operation of any equipment other than that of the creator of such disturbances.

61-15.B.10. Hazardous Materials and Toxic Wastes.

The handling and storage of hazardous materials and toxic wastes shall be in accordance with the applicable regulations of the United States Environmental Protection Agency (EPA), the Pennsylvania Department of Environmental Resources (DER), and the United States Occupational Safety and Health Administration (OSHA).

61-15.B.11. Other Performance Criteria.

From time to time, impacts other than those enumerated above may be identified. These

impacts shall be categorized, using national and state methodology. Appropriate performance standards shall then be devised to control the off-site impacts.

61-15.C. ADMINISTRATION.

61-15.C.1. Interpretation and Application of Standards.

- a) The Performance Standards contained herein shall be the minimum standards to be met and maintained by all uses established after the effective date of this Ordinance.
- b) If any existing use or building or other structure is extended, enlarged or reconstructed, the Performance Standards herein shall apply to such extended, enlarged or reconstructed portion or portions of such use, building or other structure.
- c). Determinations necessary for administration and enforcement of Performance Standards set forth herein range from those which can be made with satisfactory accuracy by a reasonable person using normal senses and no mechanical equipment to those requiring great technical competence and complex equipment for precise measurement. It is the intent of this Ordinance that:
 - 1) Where determinations can be made by the Code Enforcement Officer or other Township employees using equipment normally available to the Township or obtainable without extraordinary expense, such determinations shall be so made before notice of violation is issued.
 - 2) Where technical complexity of extraordinary expense makes it unreasonable for the Township to maintain the personnel or equipment necessary for making difficult or unusual determinations, procedures shall be available for 1) causing corrections of apparent violations of Performance Standards; 2) protecting individuals from arbitrary, capricious and unreasonable administration and enforcement of Performance Standards

regulations; and 3) protecting the general public from unnecessary costs for administration and enforcement.

61-15.C.2. Application Submittal.

Applications for non-residential uses (Sections 61-6 through 61-12 of this Ordinance) shall be accompanied by a certification from a professional engineer registered in the Commonwealth of Pennsylvania that the proposed use can meet the Performance Standards set forth in this Ordinance. All applications shall include, but shall not be limited to, the following informational items:

- a) Plans of existing or proposed construction and development;
- b) A description of existing or proposed machinery, processes and products;
- c) Specifications for the mechanisms and techniques used or proposed to be used in restricting possible dangerous or objectionable conditions as set forth in this Ordinance;
- d) Measurement or estimate of the amount or rate of emission of any dangerous or objectionable elements as set forth in this Ordinance.

61-15.C.3. Application Review.

All applications for non-residential use shall be reviewed by the Township Engineer for compliance with these Performance Standards. No application for non-residential use shall be approved until it is certified in writing by the Township Engineer that the proposed use can meet these Performance Standards. The applicant shall reimburse the Township for all expense fees incurred by the Township.

61-15.C.4. Enforcement.

- a) The Code Enforcement Officer shall investigate any purported violation of these Performance Standards. If the Code Enforcement Officer finds, after making determinations in the manner set forth in this Ordinance, that there is a violation of the Performance Standards set forth

herein, he shall take or cause to be taken lawful action to cause correction to within the limits established by such Performance Standards. Failure to obey lawful orders concerning such corrections shall be punishable under the provisions of Section 61-16.

- b) If, in the considered judgment of the Code Enforcement Officer, there is probable violation of the Performance Standards set forth herein, the following procedures shall be followed:
 - 1) The Code Enforcement Officer shall give written notice, by certified mail or delivered personally to the person or persons responsible for the alleged violation. The notice shall describe the particulars of the alleged violation and the reasons. The notice shall describe the particulars of the alleged violation and the reasons why the Code Enforcement Officer believes that there is a violation, and shall require an answer or correction of the alleged violation to the satisfaction of the Code Enforcement Officer within a time limit set by the Code Enforcement Officer. The notice shall state, and it is hereby declared, that failure to reply or correct the alleged violation to the satisfaction of the Code Enforcement Officer within the time set constitutes admission of violation of the terms of this Ordinance. The notice shall state that, on request of those to whom it is directed, technical determinations as described in this Ordinance will be made and that, if violations as alleged are found, costs of such determinations shall be charged against those responsible for the violation, in addition to such other penalties as may be appropriate. If it is determined that no violation exists, the cost of the determination will be paid by the Township.
 - 2) If there is no reply within the time limit set but the alleged violation

is corrected to the satisfaction of this Ordinance, in the determination of the the Code Enforcement Officer, he shall note "Violations Corrected" on his copy of the notice and shall retain it among his official records, taking such other actions as may be warranted.

- 3) If there is no reply within the time limit set and the violation is not corrected to the satisfaction of the Code Enforcement Officer within the time limit set, he shall take or cause to be taken such action as is warranted by continuation of a violation after notice to cease.
- 4) If a reply is received within the time limit set indicating that the alleged violation will be corrected to the satisfaction of the Code Enforcement Officer but requesting additional time, the Code Enforcement Officer may grant an extension of time if he deems it warranted in the circumstances of the case and if the extension will not, in his opinion, cause imminent peril to life, health or property.
- 5) If a reply is received within the time limit set requesting technical determination as provided in this Ordinance and if the alleged violation continues, the Code Enforcement Officer may call in properly qualified experts to make the determinations. If such determinations indicate violation of the Performance Standards, the costs of the determination shall be assessed against the person or persons responsible for the violation, in addition to such other penalties as may be appropriate under the terms of Section 61-16 of this Ordinance. If no violation is found, the costs of the determinations shall be paid by the Township without assessment against the person or persons involved.

61-15.C.5.

Existing Nonconforming Uses.

- a) All existing non-residential uses established prior to the effective date of this Ordinance and not in conformance with the Performance Standards set forth herein may continue to operate, but may not become more nonconforming.
- b) All such uses, however, shall fully comply with these Performance Standards within five (5) years after certification by the Code Enforcement Officer of any instance of non-compliance.

TABLE 1

RESIDENTIAL AREA AND BULK REQUIREMENTS

Zoning District	R-1 Residential				R-2	R-3
Dwelling Unit Type	Single-Family detached	Single-Family semi-detached	Two-Family detached	Single-Family attached	Single-Family semi-detached	Apartment
Lot Area, minimum square feet	3,200	3,200	5,000	2,000	3,200	21,780
Lot Width, minimum	40'	37'	40'	20'	37'	100'/80' if frontage on more than one street
Yard, minimum						
Front, depth	15'	15'	15'	15'	15'	15' from all public street
Side, width	7'	7'	12'	-	10'	rights-of-way, 10' otherwise for all side or rear property lines
Rear, depth	15'	15'	15'	15'	15'	2 stories
Corner, yard which is not a front yard depth	15'	15'	15'	-	15'	30'
Height, maximum	35'	35'	35'	35'	35'	25%
Building Coverage, aximum	-	35%	35%	-	-	60%
Lot Coverage, aximum	35%	50%	50%	-	-	100'
Building Length, aximum	-	-	-	-	-	20'
Building Separation, inimum	-	-	-	-	-	

TABLE 1
RESIDENTIAL AREA AND BULK REQUIREMENTS
(CONTINUED)

Zoning District	R-1 Residential		R-2		R-3
Accessory Structure, setback	3'	3'	3'	3'	-
Square Footage per Dwelling Unit, minimum	-	-	-	-	1,800'

TABLE 2

COMMERCIAL, BUSINESS AND INDUSTRIAL AREA AND BULK REQUIREMENTS

Zoning District	WA	CRS	BCD	PCI	I	AP
	Waterfront	Commercial Retail/ Services	Business Center District	Planned Commercial/ Industrial	Industrial	Airport
Lot area, minimum square feet	30,000	5,000	43,560	174,240	43,560	43,560
Lot width, minimum	100'	50'	100'	200'	75'	200'
Front yard depth minimum	35'	25'	75'	100'	50'	50'
Side yard width, minimum	15'	7'	25'	40' 100'*	15'	25'
Rear yard depth minimum	25'	7'	30'	40'/50' if over six stories in height 100'*	15'	25'
Height maximum	50' Up to 75' by Conditional Use	50'	75' Higher by Con- ditional Use	75' Up to 100' by Condi- tional Use	100' or as determined by Federal Aviation Requirements	
Building coverage maximum	35%	50%	35%	35%	60%	30%
Lot coverage maximum	65%	80%	75%	65%	80%	65%
Building separation minimum	25'	-	35'	30'	10'	-
Open Space coverage minimum	35%	20%	25%	35%	20%	35%

* Abutting Residential

TABLE 3

STANDARD OFF-STREET PARKING REQUIREMENTS FOR NON-RESIDENTIAL DEVELOPMENT

USE	ZONING DISTRICT			
	<u>WA</u>	<u>CRS</u>	<u>BCD</u>	<u>PCI</u>
<u>Commercial</u>				
General Retail Store/Shop	1:250	1:250	1:250	1:250
Large Product Retail (Furniture, Appliances, etc.)	X	1:800	1:800	1:800
Service Store/Shop	1:250	1:250	1:250	1:250
Restaurant/Tavern (sit-down)		1:4 seats plus 1:each employee		
Restaurant (drive-through)	X	1:75	X	X
Motor Vehicle Sales Agency	X	1:200 sq. ft. floor area in sales room plus 1:each service stall	X	X
Motor Vehicle Service/Repair		1:each rack plus 1:each pump plus 1:each employee	X	X
Theater	X	1:3 seats	X	X
Recreation/Amusement Place	1:150	1:150	X	1:150
Hotel/Motel		1.25 spaces:each guest room		
Convention Center	X	X	1:35	X
Marina/Yacht Club		1:3 boat slips	X	X

NOTE: The standard used is one (1) parking space: _____ sq. ft. Gross Floor Area (GFA) unless otherwise specified.

X = No requirement

TABLE 3

STANDARD OFF-STREET PARKING REQUIREMENTS FOR NON-RESIDENTIAL DEVELOPMENT
(CONTINUED)

<u>USE</u>	<u>ZONING DISTRICT</u>					
	<u>WA</u>	<u>CRS</u>	<u>BCD</u>	<u>PCI</u>	<u>IND</u>	<u>AP</u>
<u>Office</u>						
Professional/Business/ Financial Services	X	1:350	1:350	1:350	1:350	X
Medical/Dental	X	6:doctor or dentist			X	X
<u>Industrial</u>						
Research and Development	X	X	1:1000 plus 1:em- ployee on largest shift			X
Light Manufacturing	X	X	1:1000 plus 1:com- pany vehicle plus 1:employee on largest shift			X
Light Terminal Facilities	1.5:employee on largest shift					
Warehouse/Distribution Center/Shipping and Freight	1:1000 plus 1:company vehicle plus 1:employee on largest shift			1:1000 plus 1:company vehicle plus 1:employee on largest shift		
Wholesale Business/Trade	X	X			1:1000	

NOTE: The standard used is one (1) parking space: _____ sq. ft. Gross Floor Area (GFA) unless otherwise specified.

X = No requirement

TABLE 4

LOADING/UNLOADING BERTH REQUIREMENTS

<u>Land Use</u>	<u>Gross Floor Area (in Sq. Ft.)</u>	<u>Number of Recommended Births</u>
Commercial (Retail, Business and Personal Services, Wholesaling, Major Applicances and Motor Vehicle Dealers)	10,000 - 15,000	1
	15,001 - 40,000	2
	40,001 - 100,000	3
	100,001 - 300,000	4
	300,001 - 1,000,000	5
	Over 1,000,000	6
Hotels and Motels (where applicable)	10,000 - 100,000	1
	100,001 - 200,000	2
	200,001 and over	3
Office (Offices, Banks, Financial and Pro- fessional Services)	5,000 - 40,000	1
	40,001 - 100,000	2
	100,001 - 300,000	3
	300,001 and over	4
Industrial, Warehousing and Distribution	5,000 - 40,000	1
	40,001 - 70,000	2
	70,001 - 110,000	3
	110,001 - 160,000	4
	160,001 - 240,000	5
	240,001 - 350,000	6
	350,001 - 500,000	7
	500,001 - 700,000	8
	700,001 - 1,000,000	9
	1,000,001 and over	10

TABLE 5

NON-RESIDENTIAL BUFFERING AND LANDSCAPING REQUIREMENTS

Zoning District	WA	CRS	BCD	PCI	I
	Waterfront	Commercial Retail/ Services	Business Center District	Planned Commercial/ Industrial	Industrial
Minimum width of buffer abutting a residential district	8'	10'	50'	6'	50'
Minimum height of planted visual screen abutting a residential district	6'	8'	8'	8'	12'
Minimum width of buffer abutting a non-residential district	-	-	-	-	3'
Minimum height of planted visual screen abutting a non-residential district	-	-	-	-	6'
Minimum width of buffer screening abutting a residential use in a non- residential district	6'	6'	6'	6'	8'

Figure 1. Depiction of Area and Bulk Terminology and Dwelling Types for R-1 and R-2 Residential Districts

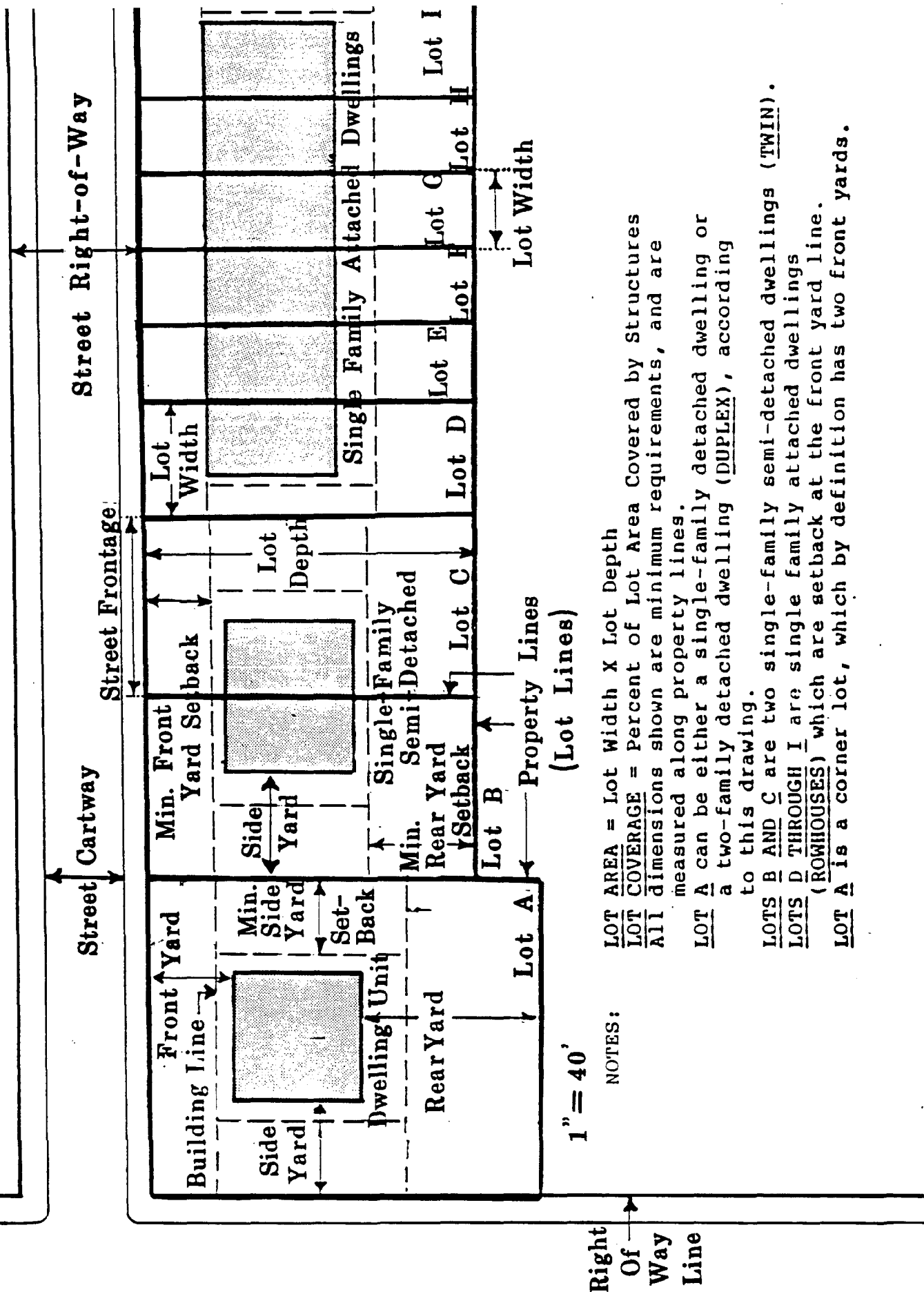
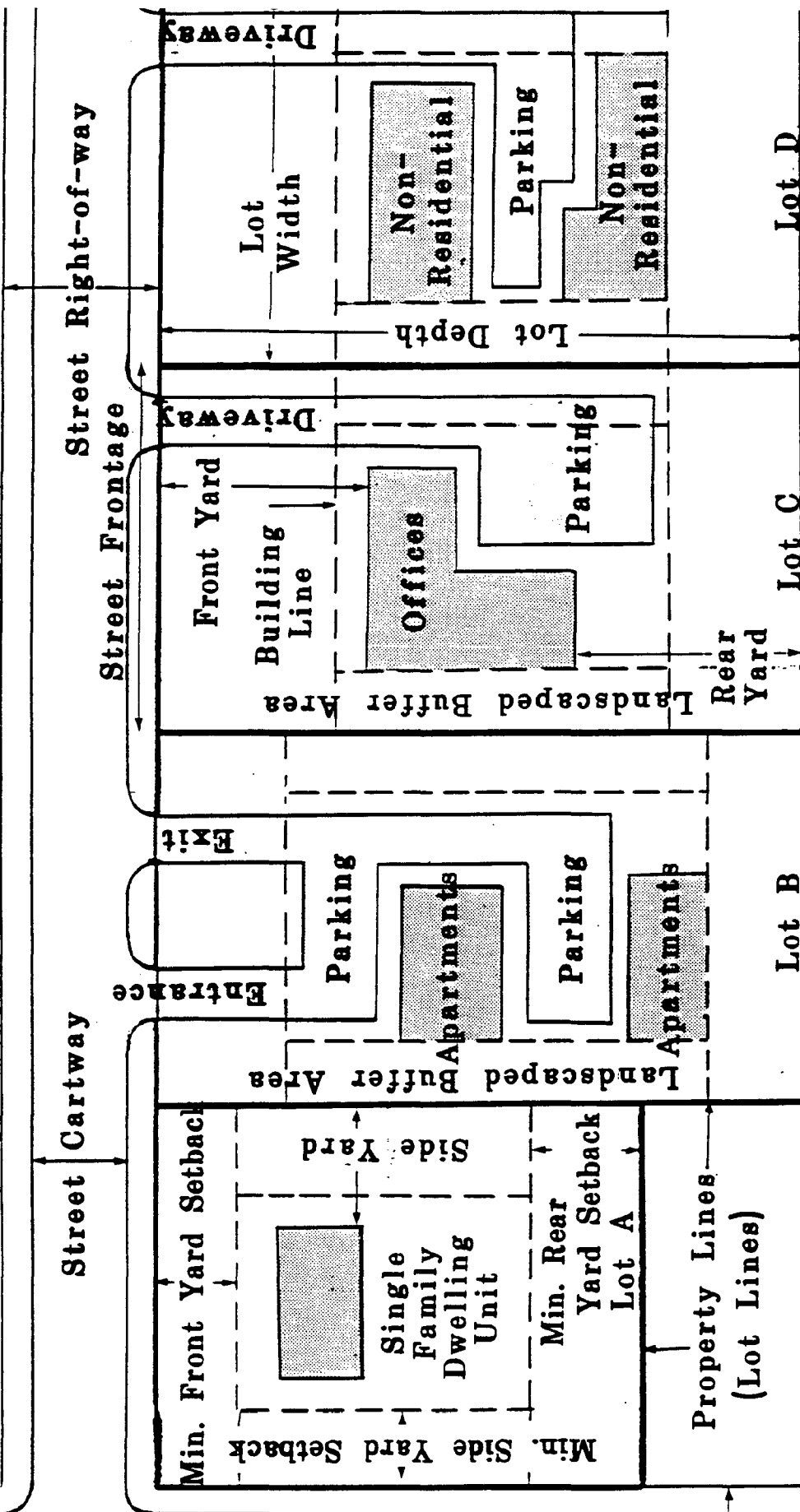


Figure 2. Depiction of Area and Bulk Terminology for R-3, R-4, and Non-Residential Districts



NOTES:

Lot Area = Lot width X Lot depth.

Lot Coverage = Percent of lot area covered by structures.

Lot A is a corner lot on which is a single family detached dwelling.

Lot B illustrates two apartments with two access points, off-street parking and buffering next to the single family dwelling on lot A.

Lots C & D show commercial, office, or industrial developments

Lots B & D are described as land developments.

1" = 40'

APPENDIX

B

APPENDIX B

SECTION 61-6

WA - WATERFRONT DISTRICT

61-6.A. PURPOSE OF DISTRICT.

The purpose of this district is to establish a coordinated, cohesive mixed-use waterfront development pattern devoted to a variety of waterfront-oriented and waterfront-dependent options, to include commercial, recreational, tourist, cultural and residential options; to maintain historic values and structures along the waterfront; to revitalize the waterfront by creative reuse of existing structures; and to provide emergency and public access to the waterfront.

61-6.B. USES BY RIGHT.

61-6.B.1. Marina, yacht club, seaplane base; and accessory sales, storage and repair facilities.

61-6.B.2. Maritime motor vehicle service and repair stations.

61-6.B.3. Recreational facilities, including parks, suitable for fishing, picnicking, swimming and other water sports.

61-6.B.4. Commercial centers, shops, stores.

61-6.B.5. Restaurants.

61-6.B.6. Motels, hotels, inns and other similar establishments.

61-6.B.7. Residential development, including all uses permitted in the R-3 Residential Multi-Family District development.

61-6.B.8. Port terminal shipping and receiving facilities.

61-6.C. CONDITIONAL USES.

The following use shall be subject to review and approval by the Township Board of Commissioners in accordance with Section 61-16.D, as well as the criteria set forth in this section.

61-6.C.1. Waterbased sport racing facilities.

Conditions for approval:

- a) A minimum of one (1) parking space must be provided for every three (3) spectator seats.
- b) Public rest rooms and sanitary facilities must be provided.
- c) A right-of-way, of at least twenty-five (25) feet in width, for public access to the Delaware River, shall be provided.
- d) A buffer strip in the form of a planted visual screen shall be planted at the edge of each property boundary line abutting a residential or commercial lot. Such planted screen shall be a minimum of four (4) feet in width and ten (10) feet in height.

61-6.C.2. Waterbased or water-related light industrial manufacturing uses.

Conditions for approval:

- a) All accessory uses shall be housed in enclosed structures.
- b) The site design and landscaping scheme shall incorporate the waterfront as an integral element of the site.
- c) A planted visual screen of at least four (4) feet in width and ten (10) feet in height shall be added adjacent to each residential and commercial property.

61-6.C.3 Offices.

Conditions for approval:

- a) The site design and landscaping scheme shall incorporate the waterfront as an integral element of the site.
- b) A right-of-way, of at least twenty-five (25) feet in width, for public access to the Delaware River, shall be provided.

61-6.C.4. Any other uses not enumerated but of the same general character as any of the aforesaid per-

mitted uses subject to the conditions applicable to that type of use.

61-6.D. ACCESSORY USES.

61-6.D.1. Swimming pools, as further regulated by Chapter 49 of the Township Code.

61-6.D.2. Signs, as regulated by Section 61-14 of this Ordinance.

61-6.D.3. Satellite dish, as regulated by Section 61-13.J. of this Ordinance.

61-6.E. AREA AND BULK REGULATIONS.

Figure 2, page 98, graphically depicts the terminology used. Table 2, page 92, sets forth the basic area and bulk requirements. Measurements are as defined in Section 61-2. Nonconformities are handled under the provisions of Section 61-17.

61-6.F. PARKING, LOADING, UNLOADING AND ACCESS.

61-6.F.1. Standard regulations and requirements are found in Section 61-13.A. and Tables 3 and 4, pages 93 and 95.

61-6.F.2. For uses not specifically enumerated in Table 3, the Code Enforcement Officer shall determine the parking standards.

61-6.F.3. Residential off-street parking requirements are as determined by the R-1, R-2, and R-3 Residential District requirements.

61-6.G. BUFFERING AND LANDSCAPING.

These requirements are found in Section 61-13.E. and Table 5, page 96.

61-6.H. PERFORMANCE STANDARDS.

The provisions of Section 61-15 shall be applicable.

APPENDIX

C

APPENDIX C

SECTION 61-10

IND - INDUSTRIAL DISTRICT

61-10.A. PURPOSE OF DISTRICT.

The intent of this district is to provide for, maintain and facilitate the traditional manufacturing, storage and warehousing purposes and land uses in the Township consistent with current design and landscaping concepts; as further regulated by performance standards, to ensure that no significant off-site impacts are generated by the on-site uses, process and/or activities.

61-10.B. USES BY RIGHT.

61-10.B.1. Manufacturing and office development.

61-10.B.2. Storage, warehousing and distribution operations.

61-10.B.3. Wholesale trade.

61-10.B.4. Trucking facility and other transportation-related operations.

61-10.B.5. Motor vehicle sales.

61-10.B.6. Motor vehicle service and repair provided storage of vehicles is within enclosed structures.

61-10.B.7. Research and development facility, including prototype manufacturing.

61-10.B.8. Heliport when used in conjunction with a use permitted in this district. Such heliport shall not be used for a commercial use.

61-10.B.9. Non-residential uses as permitted by right in the WA-Waterfront District.

61-10.B.10. Other uses of the same general character as any of the aforesaid uses enumerated above.

61-10.C. ACCESSORY USES.

61-10.C.1. Signs, as regulated by Section 61-14.

61-10.C.2. Satellite dishes, as regulated by Section 61-13.J.

61-10.C.3. Garages.

61-10.D. AREA AND BULK REGULATIONS.

Figure 2, page 98, graphically depicts the terminology used. Table 2, page 92, sets forth the basic area and bulk requirements. Nonconformities are handled under the provisions of Section 61-17 of this Ordinance.

61-10.E. PARKING, LOADING, UNLOADING AND ACCESS.

These requirements are found in Section 61-13.A. and Tables 3 and 4, pages 93 and 95.

61-10.F. BUFFERING AND LANDSCAPING.

These requirements are found in Section 61-13.E. and Table 5, page 96.

61-10.G. PERFORMANCE STANDARDS.

The provisions of Section 61-15 shall be applicable.

APPENDIX

D

APPENDIX D

SECTION 61-8

BCD - BUSINESS CENTER DISTRICT

61-8.A. PURPOSE OF DISTRICT.

The purpose of this district is to encourage and provide for flexible, long-term development of planned business centers consisting of multiple uses in an integration of designs; to promote strong project unity, treating separate but adjacent parcels in proximity to each other as a single entity; to allow for the clustering of buildings and open space so as to establish coverages and open space requirements for the entire district in lieu of a lot-by-lot development; and to allow for the sharing of service drives, parking, access areas, amenities and open spaces.

61-8.B. USES BY RIGHT.

61-8.B.1. Office development.

61-8.B.2. Banks and/or financial institutions.

61-8.B.3. Retail stores.

61-8.B.4. Motel or hotel.

61-8.B.5. Restaurants.

61-8.B.6. Personal service shops.

61-8.B.7. Convention center.

61-8.B.8. Research and development facility.

61-8.B.9. Light manufacturing.

61-8.B.10. Warehouse and distribution center.

61-8.B.11. Food preparation and catering service.

61-8.B.12. Freight, transportation and shipping facilities, but not valet parking operations as a use by right.

61-8.C. CONDITIONAL USES.

The following uses shall be subject to review and approval by the Township Board of Commissioners in accordance with Section 61-16.D, as well as the criteria set forth in this section.

61-8.C.1. Commuter parking, park and ride, valet parking operations, or long-term parking facility.

Conditions for approval:

- a) No means of ingress or egress shall enter a residential street.
- b) A buffer area, at least five (5) feet in width shall be provided along the perimeter of the parking area when adjacent to a residential district.

61-8.C.2. Other uses of the same general character as any of the permitted uses, subject to the conditions to such similar use.

61-8.D. ACCESSORY USES.

61-8.D.1. Signs, as regulated by Section 61-14, generally, and Section 61-14.I., specifically.

61-8.D.2. Satellite dishes, as regulated by Section 61-13.J.

61-8.D.3. Parking garages, including multi-level facilities.

61-8.D.4. Recreational and/or day care facilities for employees.

61-8.D.5. Company motor vehicle maintenance operations.

61-8.E. AREA AND BULK REGULATIONS.

Figure 2, page 98, graphically depicts the terminology used. Table 2, page 92, sets forth the basic area and bulk requirements. Nonconformities are handled under the provisions of Section 61-17 of this Ordinance.

61-8.F. PARKING, LOADING, UNLOADING AND ACCESS.

These requirements are found in Section 61-13.A. and Tables 3 and 4, pages 93 and 95. Off-street parking shall be permitted in front, side or rear yards except in the required buffer areas, as set forth in Table 5, page 96.

61-8.G. BUFFERING AND LANDSCAPING.

These requirements are found in Section 61-13.E. and Table 5, page 96.

61-8.H.

PERFORMANCE STANDARDS.

The provisions of Section 61-15 shall be applicable.

APPENDIX

E

SECTION 61-12

OR - OUTDOOR RECREATION DISTRICT

61-12.A. PURPOSE OF DISTRICT.

The purpose of this district is to provide for public outdoor recreational, educational and scientific activities, including the necessary physical improvements such as interpretive centers, trails, river and creek access, and other recreational facilities; to preserve public land with appropriate management techniques, including environmental protection, restoration and enhancement; and to protect adjacent lands from stormwater impacts by appropriate engineering practices.

61-12.B. USES BY RIGHT.

61-12.B.1. Outdoor recreation, both land- and water-based.

61-12.B.2. Environmental education and scientific endeavors, including interpretive centers and related physical improvements.

61-12.B.3. Land and water maintenance, restoration and upgrading activities, to include species and habitat preservation.

61-12.B.4. Stormwater management facilities.

61-12.B.5. Other public uses and facilities.

61-12.C. AREA AND BULK REGULATIONS.

Given the nature and ownership of lands which are zoned Outdoor Recreation, no area and bulk regulations shall apply.

61-12.D. OFF-STREET PARKING AND ACCESS.

61-12.D.1. One (1) parking space shall be provided for every 300 square feet of usable floor area of all buildings devoted to public use.

SECTION 61-13

GENERAL REGULATIONS

These regulations shall be in force throughout the Township, as applicable to the particular zoning districts. They supplement the requirements which are listed in each zoning district.

61-13.A. OFF-STREET PARKING, LOADING, UNLOADING, AND ACCESS.

Each use in the Township shall provide sufficient off-street parking, loading, unloading and access to serve its operations. Design standards are found in the Subdivision and Land Development Ordinance, Chapter 48A of the Township Code.

61-13.A.1. Off-Street Parking.

- a) Unless otherwise specified, parking shall be required on the particular lot which is generating the parking requirement. Provision for shared parking across subdivision lines may be allowed in non-residential land uses provided that the overall development being served by this shared parking meets the overall parking requirements generated by this development.
- b) Parking requirements are expressed in terms of parking spaces for motor vehicles gauged to the specific land use. Refer to Chapter 48A of the Township Code for dimensional requirements of the spaces. Unless otherwise specified, gross floor area of the development shall be used to determine the necessary number of parking spaces.
- c) Table 3, page 93, lists the specific parking requirements for non-residential development. Residential parking standards are found within each residential zoning district.
- d) Where the computation of required parking spaces results in a fraction of a space, only the fraction of one-half or more shall be counted as one additional space.

APPENDIX

• F

APPENDIX F

SECTION 61-3

R-1 RESIDENTIAL DISTRICT

61-3.A. PURPOSE OF DISTRICT.

The purpose of this district is to provide for, maintain and preserve the established low-density residential character of neighborhoods; to provide for open space between residential structures to foster a desirable living environment; to provide for accessory uses pertinent to the primary residential purpose; and to permit various community-oriented land uses.

61-3.B. USES BY RIGHT.

61-3.B.1. Single-family detached dwelling.

61-3.B.2. Single-family semi-detached dwelling.

61-3.B.3. Municipal or public use, including school.

61-3.B.4. Recreation, park or play area.

61-3.C. USES BY SPECIAL EXCEPTION.

The following uses shall be subject to review and approval by the Zoning Hearing Board in accordance with Section 61-18 of this Ordinance, as well as the criteria set forth in this section.

61-3.C.1. Church or other place of worship, including rectory or parish house.

Conditions for approval:

a) One (1) off-street parking space shall be provided for every ten (10) seats.

b) Additional buffering shall be added along each side and rear yard; this buffer shall consist of a planted visual screen of at least four (4) feet in width and six (6) feet in height.

61-3.C.2. Home occupation, incidental to the main purpose of residence, such as dressmaker, teacher, physician, dentist, lawyer, or any other similar profession or occupation.

Conditions for approval:

- a) Such home occupation shall be located within a dwelling in which the practitioner resides, or in a building accessory thereto.
- b) The area used for home occupation shall not exceed twenty-five (25) percent of the total floor area.
- c) There shall be no external evidence of such home occupation except a sign no larger than six (6) inches by eighteen (18) inches.
- d) There may be no more than three (3) non-residential employees to the home occupation.
- e) The off-street parking requirements for non-residential districts shall apply according to the type of home occupation proposed.
- f) The office shall have an entrance separate from the main entrances to the residence.
- g) No goods shall be publicly displayed.

61-3.C.3. Conversions of an existing use to another allowable use in the R-1 District, subject to the requirements of the proposed use.

61-3.C.4. Accessory apartments in single-family detached dwellings, for relatives only.

Conditions for approval:

- a) Additional off-street parking shall be required according to the requirements of the R-3 District.

61-3.C.5. Club or lodge.

Conditions for approval:

- a) One (1) off-street parking space shall be provided for every three (3) club members.
- b) Buffering shall be provided along each side and rear yard; the buffer shall con-

sist of a planted visual screen of at least four (4) feet in width and eight (8) feet in height.

61-3.D. ACCESSORY USES.

The following accessory uses shall comply with the requirements of Section 61-13.

61-3.D.1. Private garage or carport, a maximum of one (1) story in height.

61-3.D.2. Toolsheds and/or household storage structures.

61-3.D.3. Private swimming pool, as further regulated by the Swimming Pool Ordinance, Chapter 49 of the Township Code.

61-3.D.4. Satellite dish, as regulated by Section 61-13.J.

61-3.E. AREA AND BULK REGULATIONS.

Figure 1, page 97, graphically depicts the terminology used. Table 1, page 90, sets forth the numerical requirements. Measurements are as defined in Section 61-2. Dimensions are either minimum or maximum requirements, as noted. These regulations shall apply to buildings and structures hereafter erected or altered.

61-3.F. OFF-STREET PARKING.

61-3.F.1. Single-family detached dwellings shall require two (2) off-street parking spaces.

61-3.F.2. Single-family semi-detached dwellings shall require two (2) off-street parking spaces per dwelling unit.

61-3.F.3. Municipal or public use facilities shall require one (1) off-street parking space for each 400 square feet of floor area devoted to public use.

61-3.F.4. Schools shall require one (1) off-street parking space for each teacher and other employees.

61-3.F.5. Parking requirements for offices or conversions shall be as set forth in Table 3, page 93, according to the specific land use.

SECTION 61-4

R-2 RESIDENTIAL DISTRICT

61-4.A. PURPOSE OF DISTRICT.

The purpose of this district is to provide for, maintain and preserve the established attached housing character in a village setting; provide for open space between residential structures to foster a desirable living environment; and to permit uses accessory to the primary residential purpose.

61-4.B. USES BY RIGHT.

61-4.B.1. Single-family attached dwelling.

61-4.B.2. Two-family detached dwelling, of which at least one family shall own and reside in one of the dwelling units.

61-4.B.3. Any use permitted by right in the R-1 Residential District.

61-4.C. USES BY SPECIAL EXCEPTION.

The following uses shall be subject to review and approval by the Zoning Hearing Board in accordance with Section 61-18, as well as the criteria set forth in this section.

61-4.C.1. Home occupation, incidental to the main purpose of residence, similar to those enunciated in the R-1 Residential District, and allowable under the same conditions specified in 61-3.C.2.

61-4.C.2. Conversions of an existing use to another allowable use in the R-2 District, subject to the requirements of the proposed use.

61-4.D. ACCESSORY USES.

The following accessory uses shall comply with the requirements of Section 61-13.

61-4.D.1. Private garage or carport, a maximum of one (1) story in height.

61-4.D.2. Toolsheds and/or household storage structure.

61-4.D.3. Satellite dish, as regulated by Section 61-14.J.

61-4.E. AREA AND BULK REGULATIONS.

Figure 1, page 97, graphically depicts the terminology used. Table 1, page 90, sets forth the respective numerical requirements. Measurements are as defined in Section 61-2. Dimensions are either minimum or maximum requirements, as noted.

61-4.F. OFF-STREET PARKING.

61-4.F.1. Two (2) off-street parking spaces shall be required, per dwelling unit, for residential purposes.

61-4.F.2. Parking requirements for offices or conversions shall be as set forth in Table 3, page 93, according to the specific land use.

SECTION 61-5

R-3 RESIDENTIAL MULTI-FAMILY DISTRICT

61-5.A. PURPOSE OF DISTRICT.

The purpose of this district is to provide for multi-family housing; establish open spaces and landscaping in an integrated fashion so as to foster a desirable living environment; and to provide for off-street parking and circulation areas so as to furnish adequate spaces and circulation patterns.

61-5.B. USES BY RIGHT.

61-5.B.1. All uses permitted by right in the R-2 Residential District, as regulated by the R-2 Residential area and bulk requirements.

61-5.B.2. Multi-family dwelling.

61-5.C. ACCESSORY USES.

For uses permitted by Section 61-5.B.1. above, the accessory uses shall be as allowed in the R-1 and R-2 Residential Districts.

61-5.D. AREA AND BULK REGULATIONS.

Figure 2, page 98, graphically depicts the terminology used. Table 1, page 90, sets forth the basic area and bulk requirements. Measurements are as defined in Section 61-2.

61-5.E. ADDITIONAL STANDARDS.

For multi-family dwellings, the following provisions shall apply.

61-5.E.1. Minimum Floor Area Per Unit.

The minimum net floor area per dwelling unit shall be as follows:

1 bedroom unit	-	625 square feet
2 bedroom unit	-	750 square feet
3 bedroom unit	-	925 square feet

61-5.E.2. Buffering and Landscaping.

A landscaped planted area five (5) feet wide shall be required adjacent to the front of the building(s). A planted visual screen, four (4) feet wide and six (6) feet high, shall be required along each side and rear property lines. Section 61-13.E. of this Ordinance contains further buffering and landscaping requirements.

61-5.E.3. Lighting.

Lighting facilities shall be provided for the safety and convenience of the residents and visitors. All driveways and parking areas must be properly lighted to assure safe driving conditions at night and to provide security for residents and visitors. The facilities shall be arranged in a manner that will protect the street and neighboring properties from excessive glare and hazardous interference of any kind.

61-5.E.4. Refuse Collection.

All refuse shall be placed in closed, vermin-proof containers. All refuse containers shall be screened by means of a fence, wall and/or plantings.

61-5.F. OFF-STREET PARKING.

61-5.F.1. For 1 bedroom units, one (1) off-street parking spaces shall be required.

61-5.F.2 For 2 or more bedroom units, two (2) off-street parking spaces shall be required.

SECTION 61-7

CRS - COMMERCIAL RETAIL/SERVICES DISTRICT

61-7.A. PURPOSE OF DISTRICT.

The purpose of this district is to provide for necessary commercial activities required to support the shopping and service needs of Township residents, employees and visitors; developed on a scale in harmony with the character of the Township; serving both highway-oriented and pedestrian users; with adequate provision of off-street parking and circulation patterns.

61-7.B. USES BY RIGHT.

Generally, the uses by right shall include the following categories of retail trade, of both durable and non-durable goods, as elaborated upon by the Standard Industrial Classification (SIC) Manual of the U.S. Department of Commerce:

61-7.B.1. All uses permitted by right in the R-2 residence district,

61-7.B.2. Stores, such as general merchandise, food, apparel and furniture.

61-7.B.3. Services, such as personal, business, health, legal and social.

61-7.B.4. Eating and drinking places.

61-7.B.5. General offices.

61-7.B.6. Motion picture theaters and other amusement and recreation services.

61-7.B.7. Hotels, rooming houses and other lodging places.

61-7.B.8. Shopping center.

61-7.C. USES BY SPECIAL EXCEPTION.

The following uses shall be subject to review and approval by the Zoning Hearing Board in accordance with section as well as the criteria set forth in this section.

61-7.C.1. Motor vehicle dealerships and service stations.

Conditions for approval:

- a) No means of ingress or egress shall enter a residential street.
- b) A buffer area at least ten (10) feet in width shall be provided along the perimeter of the parking lot when adjacent to a residential district.

61-7.D. ACCESSORY USES.

Accessory uses shall be permitted when on the same lot with and customarily incidental to any of the above-permitted uses.

61-7.D.1. Signs, as regulated by Section 61-14 of this Ordinance.

61-7.D.2. Satellite dishes, as regulated by Section 61-13.J.

61-7.D.3. Garages.

61-7.E. AREA AND BULK REGULATIONS.

Figure 2, page 98, graphically depicts the terminology used. Table 2, page 92, sets forth the basic area and bulk requirements. Nonconformities are handled under the provisions of Section 61-17 of this Ordinance.

61-7.F. PARKING, LOADING, UNLOADING AND ACCESS.

These requirements are found in Section 61-13.A. and Tables 3 and 4, pages 93 and 95. Off-street parking requirements for shopping centers shall be calculated by the sum of the requirements for the individual stores and shops.

61-7.G. BUFFERING AND LANDSCAPING.

These requirements are found in Section 61-13.E. and Table 5, page 96.

61-7.H. PERFORMANCE STANDARDS.

The provisions of Section 61-15 shall be applicable.

APPENDIX

G

Recreational Use of Little Tinicum Island and the Delaware River

Little Tinicum Island is accessible only by boat. The island is used by recreational boaters and hunters. A survey was distributed to boaters that were on the island or boats that were nearby. Surveys were also distributed to nearby boating ramps and clubs. The survey had a very good return rate of 35 returned from 75 distributed.

Figure Thirteen is the survey questionnaire (page 42) with the average (mean) response following the questions. The reverse side of the survey was a map for reference and to answer question ten. An explanation of the response follows.

Question 1 and 2

Most boats traveling to the island are motorboats. Rowboats and canoes have trouble traveling upstream and downstream in the current and waves of the river. The average length of boats is 21.6 feet. These boats fall into three categories:

- a) canoes and rowboats 12 - 14 feet- 4 boats.
- b) 'run-about' motorboats 15 - 24 feet- 19 boats.
- c) cruising motor and sail boats 25 - 36 feet, 10 boats.

The draft of these boats (depth of boat below the waterline) are:

- a) 12 - 14 foot boats- less than 12 inches. Only 1 reply out of 4 in this category (25%) - 18".

- b) 15 - 24 foot boats- average draft = 28.5 inches (9 replies, 47%)
- c) 25 - 36 foot boats- average draft = 43 inches (7 replies, 70%)

The number of respondents who did not indicate the draft of their boat (16 out of 35) may indicate that the draft of their boat is shallow and does not pose a problem to island access. This assumption is supported by the fact that larger boats (with larger drafts) has a much higher response rate (70%) compared to smaller boats (25% and 47%).

Access to the island is gained by wading from an anchored boat to the shore. Canoes and rowboats pull up onto the shore. The draft of most boats (excepting 25 - 36 foot) allows anchoring in water shallow enough for wading. The 5.7 foot tidal difference creates a problem for anchored boats. The tidal extremes occur six hours apart hence the tide must be considered when anchoring for more than an hour or so. Seven respondents indicated that this

Dear boater,

Your help in completing this survey is very important. The information you provide is necessary for the Pennsylvania Department of Environmental Resources to determine the most popular use or facilities for Little Tinicum Island in the Delaware River. A stamped envelope is enclosed for your reply. Thank you for your valuable help.

1. What type of boat do you use on the Delaware River? circle one
motorboat 24 rowboat 2 canoe 1 sailboat 1 other 0
2. Length of boat? 21.6' Draft of boat? 2.9'
3. How many people usually occupy the boat? 4.4
4. How many times a year do you visit or boat near (within one mile of) Little Tinicum Island? 42
5. How many times a year do children under twelve years old accompany you on the boat? 9.3
6. What months do you visit Little Tinicum Island?
From May to September
7. What town or marina do you dock your boat at? _____
8. If you trailer your boat, what ramp or marina do you launch it from? _____
9. Please indicate the number of times per year that you participate in the following activities on or near Little Tinicum Island (within about one mile of the island):

fishing	<u>23.3</u>	swimming	<u>24.4</u>	picnicing on beach	<u>16.0</u>
hunting:		water skiing	<u>15.1</u>	picnicing on boat	<u>17.0</u>
waterfowl	<u>12.3</u>	anchoring	<u>31.2</u>	nature observation	<u>24.7</u>
game	<u>30.0</u>	boat races	<u>4.4</u>	sightseeing	<u>16.4</u>
trapping	<u>-</u>	relax on beach	<u>21.3</u>	walking on beach	<u>19.6</u>
10. On the map of Little Tinicum Island on the reverse side of this page mark your favorite spot to land or anchor by the Island.
11. Facilities you would use if built on Little Tinicum Island:

docks	<u>27</u>	picnic tables	<u>26</u>
moorings	<u>15</u>	barbecue grills	<u>25</u>
toilets	<u>25</u>	trash cans	<u>28</u>
duck blinds	<u>11</u>	nature trails	<u>18</u>
12. Hunters- Do you usually hunt from your boat or go ashore when you hunt near Little Tinicum Island? _____
13. Do you have any suggestions that would make the Island more accessible, useful or enjoyable?

was a problem. Three of these respondents indicated that a dock would solve this problem. Five other persons indicated they would use a dock but did not state their purpose, except for the reply : " a small unloading dock."

Question 3

The mean number of person per boat is 4.4. Values range from 2 to 8 persons per boat. This is an estimated total of 144 people represented by this survey.

Question 4

The average number of visits to or near Little Tinicum Island per year is 42. The total number of visits per person per year represented by this survey is 6048. This is an approximate and not actual number.

Question 5

During twenty-one percent of visits to the island children under twelve years old accompany adults.

Question 6

The average span of months that persons visit the island is 6.2 months. Most respondents start boating in May and stop in September. Two respondents boat all year. Figure Fourteen is a graph of the number of boats visiting the island during the year.

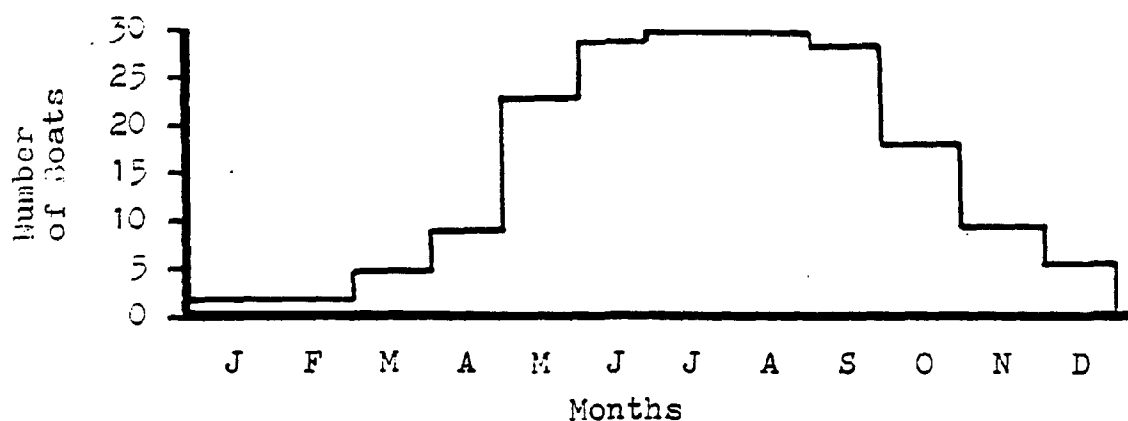


FIGURE 14

Question 7

The marina or town the respondents boats are docked at are listed below:

Morrow's Marina, Darby Creek, Ridley Twsp., PA	9
Westville Power Boat Association, Big Timber Creek, NJ	4
Seaplane Base, Delaware River, Essington, PA	2
Fox Grove Marina, Delaware River, Essington, PA	2
Riverside Yacht Club, Delaware River, Essington, PA	2
Anchorage Marina, Delaware River, Essington, PA	1
Tinicum Boat Yard, Delaware River, Essington, PA	1
Triton Marina, Chesapeake Bay, Elkton, MD	1
Darby Creek, PA	1
Essington, PA	1

Most of these boats are within a mile or two of Little Tinicum Island. The Westville Power Boat Association is 9.5 river miles upstream.

Question 8

The ramps used by respondents with trailed boats are:

Morrow's Marina, Darby Creek, Ridley Twsp., PA	6
Chester ramp, Delaware River, Chester, PA	4
Juvash Center, Timber Creek, NJ	1
Darby Creek, PA	1
Fox's Marina, Delaware River, Essington, PA	1
Seaplane Base, Delaware River, Essington, PA	1

The Chester Ramp is about 4 miles downstream of Little Tinicum Island.

Question 9

The average number of times per year each activity is engaged in by respondents is listed below in Column A. The number of boats with respondents who participate in activities is listed in Column B. The total instances of participation for each activity by total persons represented by this survey per year is listed in Column C.

	A	B	C
Swimming	24.4	25	2684
Relax on beach	21.3	24	2249
Picnic on beach	16.0	28	1971
Nature observation	24.7	18	1956
Walk on beach	19.6	22	1897
Fishing	23.3	16	1640
Picnic on boat	17.0	21	1571
Waterskiing	15.1	19	1262
Sightseeing	16.4	17	1227
Anchoring	31.2	24	749
Game hunting	30.0	5	660
Waterfowl hunting	12.3	9	487
Boat races	4.4	7	136
Trapping	-	3	>13.2

The number of hunters is greatly underestimated by this survey. The survey was distributed in early September. Only a few boaters indicated hunting as an activity they participated in. Interviews with Conservation Officers, Pennsylvania Fish Commission, Essington, PA indicate that hunters use the island only during hunting and are underestimated in this survey. The Conservation Officers report as many as thirty persons hunt from small boats in the evening on weekdays. Two duck blinds exist on the north shore and two new blinds were built this season on the south shore.

Three activities in which boaters participate, but were not questioned regarding are crabbing, overnight camping, and building fires. It is estimated that as many as six boats with an average of four persons per boat camp overnight during summer weekends.²⁸

Question 10

Figure Fifteen shows the favorite visiting location of boaters.

Question 11

The number of respondents that indicated they would use the following facilities is reported below.

docks	27	picnic tables	26
moorings	15	barbecue grills	25
toilets	25	trash cans	28
duck blind	11	nature trails	18

Question 12

Hunters indicate that they go ashore (6), hunt from boat (5), and use duck blinds (1).

Question 13

This question asked for suggestions to make the island more accessible, useful or enjoyable. The response have been categorized below.

Build docks 8
 Do nothing- we like it the way it is 7 *
 Clean up beach, tires, and trash 5
 Depth markers along shore 4
 Clean up the Delaware River 3
 Make the island a wildlife refuge 2
 Keep it simple and inexpensive 2
 Dredge channel 2
 Build breakwater for large boats 1
 Build state marina on island 1
 Picnic tables and grills 1
 No hunting near island 1
 No glass 1
 No fee for use 1
 Few rules 1
 Refreshment stand 1
 Sandy beaches 1

* Three respondents with this comment did not respond to any other question on the survey form.

APPENDIX

H

RESOLUTION

#89-02

DELAWARE COUNTY
FEE SCHEDULE
AND
SUBMISSION PROCEDURES
FOR
SUBDIVISION
AND
LAND DEVELOPMENT
REVIEWS

conducted by the
DELAWARE COUNTY PLANNING COMMISSION

EFFECTIVE
JULY 1, 1989

101 Title

This resolution may be cited as the "Delaware County Fee Schedule and Submission Procedures for Subdivision and Land Development Review."

102 Authority

This resolution is adopted pursuant to the authority granted by Section 502 of the Pennsylvania Municipalities Planning Code, as amended by Act 170 of 1988.

103 Effective Date

This resolution shall become effective on July 1, 1989, and shall remain in effect until modified, amended, or rescinded by the Delaware County Planning Commission.

104 Intent

The purpose of this fee schedule is to help defray the costs incurred by the Delaware County Planning Commission in its mandated reviews of subdivision and land development plans, in accordance with Section 502 of the Pennsylvania Municipalities Planning Code, as amended.

105 Waiver of Fees

Fees will be waived only for an application filed under the name of a governmental sub-unit of the United States or the Commonwealth of Pennsylvania, including school districts and authorities. This exemption does not apply to any private, nonprofit organization.

106 Application with Mixed Uses

Whenever an application includes proposed developments with mixed uses, the application will be separated and the appropriate fee applied to each use as described in Sections 110, 111, and 112 of this Schedule.

107 Project Area Delineation

The provisions of this section apply to nonresidential land developments where a substantial percentage of the tract is not proposed for development or consists of existing development. The fee for these developments shall be calculated in the regular fashion (Section 112) unless the developer delineates on the plan a "project area" where development is proposed to be located. The fee would then apply to the "project area" only. The acreage of the "project area" shall be shown on the Application for Review Form. The project area

shall be that portion of the tract where development or improvements of any kind are proposed, including areas devoted to parking, driveways, drainage facilities, grading, and landscaping.

108 Applicability of Fee Schedule

- A. The fee schedule below will apply regardless of whether the submitted application is for the review of a sketch plan, a preliminary plan, a final plan, or a tentative PRD. Each resubmission of a different project on the same tract of land will be charged an additional fee. However, no additional fee will be charged for refinements provided that:
- 1) The revised plan is submitted to DCPC within 180 days from the date reviewed by the Commission, and
 - 2) The plan has not been substantially altered or modified as determined by the Commission.
- B. This fee schedule will not apply to sketch plans required by DCPC for review of curative amendments or developer proposed zoning map amendments.

109 Administrative Procedures

- A. The application, with a check or money order payable to the Treasurer of Delaware County, shall be submitted to the municipality. The County fee shall not be combined with the municipal fee.
- B. Upon receipt from the applicant, the municipality will forward the County fee and three (3) sets of plans to the County Planning Commission together with the DCPC Application for Review Form, signed by the appropriate municipal official.
- C. The County Planning Commission will accept the application when all necessary information and fees have been supplied, and at that time the review time clock will start.

110 Residential Application

The following fees shall apply to all kinds of residential projects for subdivision, conveyance, incorporation, or single tract development:

<u>Type of Plan</u>	<u>General Fee</u>	<u>Additional Fee</u>
Single-Family Dwelling	\$50 per plan	\$10 per lot or unit
Multi-Family Dwelling or Condominium	\$50 per plan	\$10 per unit

111 Nonresidential Subdivision Application

The following fees shall apply to applications for the subdivision of nonresidential lots:

<u>General Fee</u>	<u>Additional Fee</u>
\$100 per plan	\$50 per lot

112 Nonresidential Land Development Application

The following fees shall apply to projects, or sections of projects, which are for nonresidential use of any kind on a single tract of land:

<u>General Fee</u>	<u>Additional Fee</u>
\$100 per plan	\$20 per acre (or portion thereof)
	\$10 per 1,000 square feet of gross floor area (or portion thereof)

113 Repeal

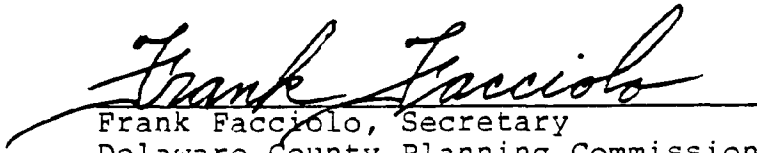
Resolution No. 76-01, as amended on February 21, 1985, is hereby rescinded.

114 Approval

RESOLVED this 15th day of June, 1989, by the Delaware County Planning Commission.



Thomas J. O'Brien, Chairman
Delaware County Planning Commission



Frank Facciolo, Secretary
Delaware County Planning Commission

APPENDIX

I

APPENDIX I

tenance, and management of the dam or water obstruction for a period of 15 years or longer, the application may be submitted by the person who has such primary responsibility; provided that the owner of a dam or reservoir, water obstruction, or encroachment shall in no event thereby be relieved of any legal duties or responsibilities for the structure or activity as imposed by the act or this chapter.

(g) Each application shall be signed by the owners of the dam or reservoir, water obstruction, or encroachment or the persons exercising primary responsibility for the dam or reservoir, water obstruction, or encroachment. In the case of a partnership, one or more members of the partnership authorized to sign on behalf of the entire partnership shall sign the application. In the case of a corporation, it shall be signed by the president, vice president, or other responsible official empowered to sign for the corporation, with the corporate seal or other proof of authorization to sign for the corporation affixed. In the case of a political subdivision, it shall be signed by the chief officer or officers of the political subdivision or other responsible official empowered to sign for the political subdivision, with the seal affixed and attested by the clerk.

(h) All plans, specifications, and reports accompanying applications for dams, bridges, and such other obstructions which would pose a threat to human life and property in the event of failure shall be affixed with the seal of a registered professional engineer and his certification, which shall read as follows:

"I (name) do hereby certify to the best of my knowledge, information and belief, that the information contained in the accompanying plans, specifications, and reports has been prepared in accordance with accepted engineering practice, is true and correct, and is in conformance with Chapter 105 of the rules and regulations of the Department of Environmental Resources."

§ 105.14. Review of applications.

(a) All applications will be reviewed in accordance with prevailing practices in the engineering profession.

(b) In reviewing any permit application under this chapter for construction or substantial modification of a dam or reservoir, water obstruction, or encroachment, the Department will consider the following factors:

- (1) Potential threats to life or property created by the project.
- (2) Potential threats to safe navigation created by the project.
- (3) The effect of the proposed project on the property or riparian rights of owners above, below, or adjacent to the project.
- (4) The effect of the proposed project on regimen and ecology of the watercourse or other body of water, water quality, stream flow, fish and wildlife, aquatic habitat, instream and downstream uses, and other significant environmental factors.
- (5) The impacts of the proposed project on any nearby national wildlife refuge, national natural landmark, National or State park or recreation area, or National or State historical site.
- (6) Compliance by the proposed project with all applicable laws administered by the Department, the Fish Commission, and any river basin commission created by interstate compact.
- (7) The need for the proposed project to be located in or in close proximity to the water and alternatives in location, design, and construction which are available to minimize the adverse impact of the project upon the environment and to protect the public natural resources of the Commonwealth.

(8) Present conditions and the effects of reasonably foreseeable future development within the affected watershed above and below the project:

- (i) Any dam, water obstruction, or encroachment shall be designed, constructed, and operated so as to assure adequacy and compliance with the provisions of

this chapter, taking into account reasonably foreseeable development within the affected watershed.

(ii) In assessing the impact of future development upon a dam, water obstruction, or encroachment, the Department may require the applicant to submit data regarding estimated development potentials and municipal, county, and regional planning related to the affected watershed.

(9) Consistency with State and local floodplain and storm water management programs, the State Water Plan, and the Coastal Zone Management Plan.

(10) Consistency with the designations of wild, scenic, and recreational streams under the National Wild and Scenic Rivers Act of 1968 or the Pennsylvania Scenic Rivers Act.

(c) In reviewing any permit applications under § 105.11(c) of this title (relating to permit requirements) and section and 6(c) of the act (32 P.S. §593.1) for the operation and maintenance of any existing dam, water obstruction, or encroachment, the Department will consider the following factors:

(1) Potential threats to life, property, or safe navigation created by the continuing operation or maintenance of the project.

(2) Any substantial adverse impacts on stream flow, water quality, or the environment which might be reduced or mitigated by reasonable changes in the operation of the project.

(3) Compliance of the operation and maintenance of the project with all applicable laws administered by the Department, the Fish Commission, and any river basin commission created by interstate compact.

(d) The Department may review permit applications for the operation and maintenance of existing projects without regard to the design criteria and construction requirements set forth in Subchapters B - J of this chapter; provided that if the Department finds that any existing dam, water obstruction, or encroachment is unsafe or adversely affects property or the environment, it may consider application of such criteria and requirements as may be reasonably necessary to correct such conditions.

§ 105.15. Environmental evaluation.

(a) Each application for construction of the following categories of activities shall include an environmental assessment, on a form established by the Department:

(1) Any dam or reservoir for the storage of water of size classification A or B or hazard classification 1 as defined in § 105.91 of this title (relating to classifications of dams and reservoirs).

(2) Any dam or reservoir used for the storage of fluids or semifluids other than water the escape of which may result in air, water, or land pollution or may result in danger to persons or property.

(3) Any dam, bridge, culvert, stream crossing, stream enclosure, dike, levee, flood wall, or stream relocation located in, along, or across a stream identified as a candidate for or included in the Federal or State wild and scenic river systems.

(4) Any stream enclosure, stream relocation, or any other activity or facility which the Department determines may have a significant impact on the environment.

(b) Based on the results of the environmental assessment, the Department may require the submission of additional information regarding one or more of the following as found necessary by the Department:

(1) The potential impacts to the extent applicable of the proposed activity on water quality, stream flow, fish and wildlife, aquatic habitat, Federal and State forests, parks, recreation, instream and downstream water uses, prime farmlands, areas or structures of historic significance, streams which are identified candidates for or included within the Federal or State wild and scenic river systems and other relevant significant environmental factors.

(2) Alternatives to the proposed action including alternative locations, routings or designs to avoid or reduce significant adverse environmental impacts.

(3) Actions to be taken through design, location, or operation of the proposed structure or other activities to mitigate any unavoidable significant environmental impacts created by the proposed project.

§ 105.16. Environmental social and economic balancing.

(a) The determination of whether the potential for significant environmental harm exists will be made by the Department after consultation with the applicant and other concerned governmental agencies. If the Department determines that there may be a significant impact on natural, scenic, historic, or aesthetic values of the environment, the Department will consult with the applicant to examine ways to reduce the environmental harm to a minimum. If, after consideration of mitigation measures, the Department finds that significant environmental harm will occur, the Department will evaluate the public social and economic benefits of the project to determine whether the harm outweighs the benefits.

(b) No application for a permit under the provisions of Subchapter D of this chapter (relating to stream enclosures), for a channel change under the provisions of Subchapter E of this chapter (relating to channel changes and dredging for facility construction and maintenance), or under the provisions of Subchapter J of this chapter (relating to discharges of dredged or fill material) or for any structure or activity which the Department determines will have a significant adverse impact on the environment or public natural resources will be approved by the Department unless the applicant demonstrates and the Department finds that the public benefits of the proposed project outweigh the harm to the environment and public natural resources. Public benefits shall include, but are not limited to:

- (1) Correction and prevention of pollution.
- (2) Protection of public health and safety.
- (3) Reduction of flood damages.
- (4) Development of energy resources.
- (5) Creation or preservation of significant employment.
- (6) Provision of public utility services.
- (7) Other essential social and economic development which benefits a substantial portion of the public.

(c) No application for a permit shall be approved by the Department in the following areas unless the applicant demonstrates and the Department finds that the project will have no significant adverse impact upon the public natural resources:

(1) Any project located in or within 100 feet of any watercourse or body of water that has been designated as a National or State wild or scenic river in accordance with the National Wild and Scenic Rivers Act of 1968 or the Pennsylvania Scenic Rivers Act (32 P.S. §§ 821.1 - 822.2).

(2) Any project located in or within 100 feet of a Federal wilderness area designated in accordance with the Federal Wilderness Act of 1964 or the Federal Eastern Wilderness Act of 1975.

(3) Any project located within an area which serves as a habitat of a rare or endangered species protected by the Federal Endangered Species Act of 1973.

(d) In reviewing permit applications, it will be the policy of the Department to encourage development that protects the natural condition of the watercourse or other body of water.

APPENDIX

J

APPENDIX J
JOINT APPLICATION FORM
INFORMATION

GENERAL:

It is very important that you provide a complete and accurate application (form, plans and support information) concerning your project. In addition, to aid in the review of your application, it is suggested that you attach photographs of your project site when submitting the permit application. If the application is incomplete or unacceptable, it will be returned.

All projects require 3 sets of plans. For content of plans, see the applicable requirements pertaining to your project in the appropriate subchapter of Chapter 105 Dam Safety and Waterway Management Rules and Regulations, and the section titled Sketch Plan and Plans in Appendix III of this guidance booklet.

The joint application, together with all maps, plans, profiles and specifications, and all papers, information and data filed in connection therewith, will remain on file in the Department of Environmental Resources and the Army Corps of Engineers.

DER FEES:

All applications for Department of Environmental Resources permits, except those submitted by federal, state, county or municipal agencies, must be accompanied by a check payable to "Commonwealth of Pennsylvania", in accordance with the following schedule:

Water Obstructions and Encroachments

Bridge Over 15 Foot Span	\$100
Enclosures	100
Channel Changes	100
Commercial Dredging	100
All Others	50

A single application may be submitted and a single permit may be issued for multiple structures and activities, which are part of a single project or facility or part of related projects and facilities, located in a single county, constructed, operated, or maintained by the same person or persons. Where a single application covers multiple structures or activities other than a single structure and related maintenance dredging, the application fee shall be the sum of fees set forth above for the applicable structures and activities but shall not exceed \$600. All stream crossings located within a single county for the installation of a public service line shall be treated as a single structure or activity.

CORPS FEES:

Do not send a permit processing fee with the copy of the application to be forwarded to the appropriate Corps District Engineer. A permit fee will be assessed by the Corps if and when the permit is about to be issued. No fee will

be charged for permits issued to Federal, State, County or Municipal Agencies. The Corps of Engineers assesses a fee of \$10.00 for private work or activities and \$100.00 for commercial activities. (Fees are assessed per application).

ENVIRONMENTAL:

Pursuant to Section 102 of the National Environmental Policy Act, 42 U.S.C. §4331 et. seq. assessment of the environmental impacts and determination of need for an Environmental Impact Statement (EIS) must be made for Federally permitted activities. This assessment or EIS is generally done by the Army Corps of Engineers. The environmental assessment will, in part, be based on the written information in Appendix II which may be required by the Army Corps of Engineers following the Corps' review of your permit application.

The Department of Environmental Resources will conduct an environmental assessment of all projects and associated impacts according to Section 105.15. Additional information may be required of the applicant based on the environmental assessment.

JOINT PERMIT APPLICATION COMPLETION INSTRUCTIONS

SECTION I-A

1. This item is a reminder to the applicant to submit 3 copies of the application and supporting documentations. If three complete permit applications are not received, your permit application will be returned.

Note: Each page of the five (5) page application form is in quadruplicate (4 pressure-sensitive copies), three (3) copies are to be submitted to DER. The fourth (marigold colored) copy of each page is for the applicant's records.

2. & Complete full name of applicant and name and title of authorized agent/preparer, mailing address and business telephone number in space provided. If authorized agent/preparer completes application, Item 3, statement of authorization, must be completed.
4. Indicate the type of ownership involved with project by checking the appropriate block.
5. Indicate the municipality and county where project is located.
6. Indicate the name of stream or body of water with which the project is associated.
7. Attach with permit application, evidence of municipal and county notification (see below).

Municipal and County Notification of Permit Application

PA Act 14, P.L. 834, enacted February 17, 1984, requires that each applicant for a permit under the Dam Safety and Encroachments Act must give written notice to the municipality(ies) and the county(ies) in which the

permitted activity is located. The written notice shall be received by the municipality(ies) and the county(ies) at least thirty (30) days before the Department of Environmental Resources may issue or deny the permit.

You may notify the municipality(ies) and the county(ies) by providing a copy of the application to each municipality and county by CERTIFIED MAIL, RETURN RECEIPT REQUESTED, or by personally delivering a copy to and obtaining a written acknowledgement or receipt from each municipality and county. Letters should be addressed to the Office of the Secretary or the clerk of the municipality and county or to the supervisor, manager or commissioners as appropriate. (Note: Notices sent to planning commissioners are not acceptable).

The submission of your application to the Department must include evidence that municipal and county notification has occurred. Acceptable forms of evidence include:

- a. Certified mail receipt and copy of letter sent to each municipality and county, or
 - b. Written acknowledgement from each municipality and county.
8. Submit sketch plan (8 1/2" x 11" drawing) and detailed plans in accordance with drawing requirements outlined in Appendix III of this Joint Permit Application Guidance Booklet and applicable subchapter of Chapter 105 of Dam Safety and Waterway Management Rules and Regulations.
 9. Indicate the Corps district where your activity will occur by checking the appropriate block (See map in Appendix V for Corps district).
 10. Indicate whether any of the proposed project which the application is being submitted for is complete by checking the appropriate block yes or no. If yes, state the reason why the project was completed and the month and year completed. Indicate existing work on attached drawings of site.
 11. Complete a narrative of project, incorporating such information as a detailed description of project, necessity of project, purpose, construction schedule, ...etc.

Example:

Proposed construction of a new bridge over Forest Run at the intersection of Forest Run and T-711. Old bridge is beyond repair and replacement is necessary in order to provide access to private homes, emergency vehicles...etc. Construction is to commence upon receipt of all necessary permits and approvals. It is anticipated from start of construction three weeks will be needed to complete bridge replacement depending on weather and stream flow. Attached is a tentative construction schedule and sequence of work.

12. List all applications, approvals, certification and denials received from other Federal, state or local agencies for any structure(s), construction, discharges or other activities described in this application. Most common

examples of other approvals are NPDES permits, sewage permits, local flood plain management permits, subdivision approvals...etc.

13. A copy of the Erosion and Sediment Pollution Control Plan and letter of review by the county Conservation District where the project is located must be submitted with the application. Letter of review should indicate that the District has reviewed the applicant's Erosion and Sediment Pollution Control Plan and consider it adequate to meet the requirements of Chapter 102 Erosion Control.
14. This section outlines the basis for state regulatory requirements and permit fee schedules for various types of projects (example - stream crossing - \$50.00) The State fee must be attached with the permit application.
15. This section outlines the basis for Federal Regulatory Requirements and permit fee schedules for various types of projects. An additional fee will be assessed when the Corps is ready to issue the permit.
16.
 - a. Self-explanatory.
 - b. Self-explanatory.
 - c. The coastal zone in the southeast portion of the State is defined as the area from the falls at Morrisville to the Delaware-Pennsylvania border and the tidal influenced portion of all streams flowing into the Delaware River. The extent of area is approximately 1/2 to 3 1/2 miles from the Delaware River.

The coastal zone in the northwestern portion of the State (Erie) is defined by physical and political boundaries. This encompasses an area of 1/2 to 3 1/2 miles from Lake Erie.

If you have any question concerning the coastal zone boundary call the Division of Coastal Zone Management at 717-783-9500 or write to DER, Division of Coastal Zone Management, P.O. Box 1467, Harrisburg, Pennsylvania 17120.

Note: An application checklist is enclosed for you to determine if all required information has been completed and ready to submit your application package.

SECTION I-B

1. Self-explanatory.
2. Complete full name, address and telephone number of property owners, lessees, etc., whose property adjoins body of water adjacent to project area in the space provided.
3. Indicate the type of activity that best describes your project by checking the appropriate block and complete your permit application in accordance

with the requirements of the applicable subchapter noted and contained in Chapter 105. Dam Safety and Waterway Management Rules and Regulations.

4. Indicate the amount of original ground cover disturbed by your project.
5. Indicate whether your proposed project impacts wetlands by checking the appropriate block and if yes, indicate the number of acres to be filled and the number of acres to be impacted. (See Definition of a Wetlands in Section 105.1 of Chapter 105)

SECTION II - SITE LOCATION

1. Self-explanatory.
2. Indicate the topographic coordinates, latitude and longitude, and name of U.S.G.S. 7.5 minute quadrangle in the space provided. If available, attach a U.S.G.S. topographic map or copy thereof, indicating project location.
3. Some municipalities have developed floodway mapping in conjunction with the Federal Emergency Management Agency (FEMA) in order to be eligible for Federal Flood Insurance. If mapping is available, attach a copy with the permit application submission delineating project site. The municipality has a copy of the flood insurance study (which contains the map) if it has been completed, or a copy of the study is available by calling (800) 638-7418.
4. Some counties have developed storm water management plans, in compliance with the Storm water Management Act (167). Indicate whether the watershed which your project is contained within has a plan by contacting the County Planning Department in the county your project is located.
5. Self-explanatory.

APPLICATION CHECKLIST
For water obstruction permit

Please check the following list to make sure you have included the required information with your application:

- ☐ Evidence of municipal and county notification
- ☐ Application is correctly signed and witnessed, with corporate or municipal seals
- ☐ Application fee
- ☐ Location map
- ☐ General plan view showing property lines
- ☐ Cross-sections at the project site showing existing and proposed conditions
- ☐ An Erosion and Sedimentation Control Plan and a copy of a letter of approval from the conservation district in the county indicated in the permit application regarding this plan
- ☐ Registered professional engineer's seal and certification (if required)
- ☐ Hydrologic and hydraulic analysis (if required)
- ☐ A letter from the municipality indicating that the project is consistent with their flood plan and storm water management program

APPENDIX VI

JOINT PERMIT APPLICATION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF DAMS AND WATERWAY MANAGEMENT

DEPARTMENT OF ARMY
(Baltimore, Buffalo, Philadelphia, Pittsburgh Districts)
Corps of Engineers

Agency Use Only	
Application #	_____
Fee	_____

If additional space is needed to complete application, use plain bond paper and attach to application. Reference section and item number for all information.

SECTION I-A Registration

- This application shall be completed in triplicate (3 copies) and forwarded to the Department of Environmental Resources, Bureau of Dams and Waterway Management, P.O. Box 2357, Room 116, Executive House, Harrisburg, PA 17120, for processing and disposition. **Three complete applications with 3 copies of all supporting documents required on the application form must be submitted or the application will be returned as incomplete.** (One copy for each: Pennsylvania Fish Commission, Department of Environmental Resources, and Army Corps of Engineers)
- Owner/applicant name, address and telephone number
(Type or Print)

- Name and title of authorized agent/preparer, address and telephone number is designated and authorized to act in my behalf as my agent in the processing of this permit application and to furnish, upon requests, supplemental information in support of the application.

- Type of Ownership— ☐ Privately owned ☐ Corporation ☐ Government Agency ☐ Partnership
- Identify municipality (township, borough, city) and county where project is located.
Municipality _____ County _____
- Identify name of stream or body of water with which project is associated. _____
- Attach evidence of municipal and county notification. (See instruction booklet).
- Sketch plan and detail plans [Army Corps and State.] (See instruction booklet and Appendix III)
- Check the corps district where your activity will occur. (See instruction booklet)
☐ Baltimore ☐ Philadelphia ☐ Pittsburgh ☐ Buffalo
- Is any portion of the activity for which authorization is sought now complete? ☐ Yes ☐ No
If answer is "Yes" give reasons, month and year the activity was complete. Indicate the existing work on drawings or plans.

- Narrative of Project (include detailed description, necessity and purpose—see example in instruction booklet)

12. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharges or other activities described in this application.

13. Attach a copy of the Erosion and Sedimentation Control Plan and letter of review by the County Conservation District.

14. State Fees and Regulatory Authority:

In compliance with the provisions of the Act of November 26, 1978, P.L. 1375, as amended (32 P.S. §693.1 *et seq.*) known as the "Dam Safety and Encroachments Act"; Act of October 4, 1978, P.L. 851 (32 P.S. §679.101 *et seq.*), known as the "Flood Plain Management Act"; and the Administrative Code, Act of April 9, 1929, P.L. 177, as amended, the Department of Environmental Resources is empowered to exercise certain powers and perform certain duties by law vested in and imposed upon the Water Supply Commission of Pennsylvania and the Water Power Resources Board. These State Acts cover broad areas and items such as stream encroachments, riprap, etc. which require consent or permit of the Department of Environmental Resources. These Acts include but are not limited to water obstructions such as any dike, bridge abutment or other structures located in, along, across or projecting into any watercourse, floodway, or body of water.

Effective September 27, 1980, all applications for Department of Environmental Resources permits, except those submitted by federal, state, county or municipal agencies, must be accompanied by a check payable to the "Commonwealth of Pennsylvania" in accordance with the following schedule:

Bridge Over 15 Foot Span	\$100
Enclosures	\$100
Channel Changes	\$100
Commercial Dredging	\$100
All Others	\$ 50

A single application may be submitted or a single permit may be issued for multiple structures and activities which are part of a single project or facility or part of related projects and facilities, located in a single county, constructed, operated, or maintained by the same person or persons. Where a single application covers multiple structures or activities other than a single structure and related maintenance dredging, the application fee shall be the sum of fees set forth above for the applicable structures and activities but shall not exceed \$600. All stream crossings located within a single county for the installation of a public service line shall be treated as a single structure or activity.

Enclosed is _____ dollars as fee for the proposed project.

15. Federal Fees and Regulatory Authority:

The Department of the Army (Corps of Engineers) permit program is authorized by Sections 9 and 10 of the River and Harbor Act of 1899 (33 U.S.C. 401 and 33 U.S.C. 403), Section 404 of the Clean Water Act (33 U.S.C. 1344), and Section 103 of the Marine Protection Research and Sanctuaries Act of 1972 (33 U.S.C. 1413). These laws require permits authorizing structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and transportation of dredged material for the purpose of dumping it into ocean waters. Information provided in this form will be used in evaluating the application for a permit. Information in the application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested is necessary in order to communicate with the applicant and to evaluate the permit application. If the necessary information is not provided, the permit application cannot be processed nor can a permit be issued. An application that is not completed in full will be withdrawn.

Do not send a permit processing fee with the copy of the application to be forwarded to the District Engineer of the Department of Army. An additional fee will be assessed when the corps is ready to issue the permit. No fee will be charged for permits issued to federal, state, county or municipal agencies.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

This application, together with all maps, plans, profiles and specifications, and all papers, information and data filed in connection therewith, will remain on file in the Department of Environmental Resources and with the U.S. Army Corps of Engineers.

16. Certification

- A. The application must be signed by the applicant. If privately owned, the individual owner must sign. For partnerships, one or more members authorized to sign on behalf of the entire partnership must sign. Signatures of the president, vice president, secretary or treasurer are required for corporations, and the corporate seal shall be affixed. For political subdivision, we require signatures of the officer or officers empowered to sign for the subdivision with the political subdivision's seal affixed and attested by the clerk. Signatures other than above must be accompanied by a power of attorney or other document indicating authorization.
- B. Application is hereby made for a permit to authorize the activities described herein. I certify I am familiar with the information contained in this application, and to the best of my knowledge and belief such information is true, complete and accurate, I further certify I possess the authority to undertake the proposed activities.
- C. I certify that the project proposed in this application complies with and will be conducted in a manner that is consistent with the approved Coastal Zone Management program of the Commonwealth of Pennsylvania. (Only portions of Erie, Bucks, Philadelphia, Delaware, and Chester Counties, are in the Coastal Zone, see instruction booklet for specific detail)

By:

(Print Name)

(Signature)

(Date)

(Title)

SEAL

Witness:

(Date)

SECTION I-B General Information

1. All projects require 3 sets of plans. For complex project (e.g. highways, housing projects...etc.) one set of full size drawings with sufficient detail to understand and evaluate the project shall also be submitted. (See instruction booklet Appendix III and applicable Subchapter of Chapter 105, Dam Safety and Waterway Management Rules and Regulations.)
2. Names, addresses and telephone numbers of property owners, lessees, etc. whose property adjoins body of water adjacent to project area.

3. Identify type activity

Check the appropriate block below that best describes your project and complete the requirements of the applicable subchapter noted and contained in Chapter 105, Dam Safety and Waterway Management rules and regulations.

- ☐ Culverts And Bridges (Subchapter C)
- ☐ Stream Enclosures (Subchapter D)
- ☐ Channel Changes And Dredging For Facility Construction And Maintenance (Subchapter E)
- ☐ Fills, Levees, Floodwall And Streambank Retaining Devices (Subchapter F)
- ☐ Stream Crossings, Outfalls And Headwalls (Subchapter G)
- ☐ Docks, Wharves, And Bulkheads (Subchapter H)
- ☐ Commercial Dredging (Subchapter I)
- ☐ Discharges Of Dredged Or Fill Material (Subchapter J)

4. What is the maximum acreage that will have its original vegetative ground cover disturbed in acres _____

5. Does proposed project impact wetlands? ☐ yes ☐ no If yes # of acres to be filled _____ ; # of acres to be impacted. _____

SECTION II Site Location

1. Provide written location of project site by noting distance from stream/road and/or nearest road intersection -- *example* (north side of Route 96, 6 miles east of the intersection of route 96 and L.R. 25220 or east side of Slippery Creek, 1000 ft. north of the intersection of Slippery Creek and PA Rte. 33)

2. Location map identification of proposed activities.

A. Topographic map coordinates

1. Lat. & Long. _____

2. Identify U.S.G.S. 7.5 minute quadrangle _____

B. Attach U.S.G.S. Topographic map, or copy thereof or other similar mapping, indicating project location (*note: all maps submitted are to be 8½" x 11" in size or folded to this size*)

3. Attach copy of floodway boundaries as indicated on maps from flood insurance studies provided by municipality (fema mapping) (if applicable)

4. Is the project located in a watershed with an approved storm water management plan? ☐ yes ☐ no

5. Any project which crosses a stream or body of water involving a pipeline, aerial crossing, road...etc., a point to point map identifying where construction of the project begins and ends must be submitted with the permit application. The map should be a 7.5 minute U.S.G.S. topographic map or copy thereof with the quadrangle name.

SKETCH PLAN
(See appendix three for details)

APPENDIX

K

APPENDIX K

URBAN WATERFRONT ACTION GROUP
CONTACTS

Patricia Alburger
Delaware River Port Authority
World Trade Division
Bridge Plaza
Camden, NJ 08101

609-963-6420

Alan D. Robinson
District Waterways
Conservation Officer
Pennsylvania Fish Commission
2nd Street and Delaware River
Essington, PA 19029

215-521-3675

Captain Larry A. Murdock
Commanding Officer
U.S. Coast Guard
MSO/Group Philadelphia
One Washington Avenue
Philadelphia, PA 19147-4395

215-271-4800

FOR BRIDGE CONSTRUCTION
PERMITS:
Bill Hemming
Commander (Obr.)
First Coast Guard District
Governors Island, NY 10004

212-668-7994

Timothy Goodger
National Marine Fisheries
Service
Railroad Avenue
Oxford, MD 21654

301-226-5771

James Butch
U.S. Environmental
Protection Agency
Region III
Wetland and Marine Policy
841 Chestnut Street
Philadelphia, PA 19107

215-597-7816

Charles J. Kulp
U.S. Fish and Wildlife
Service
State College Field Office
Suite 322
315 South Allen Street
State College, PA 16801

814-234-4130

Larry Toth
Pennsylvania Department of
Environmental Resources
Division of Coastal Zone
Management
Room 114 Evangelical Press
Building
Third and Reilly Streets
Harrisburg, PA 17120

717-783-9500

Al Woodford
Philadelphia Port
Corporation
1020 Public Ledger Building
Sixth and Chestnut Streets
Philadelphia, PA 19106

215-928-9100

*Permitting Agency

*Frank Cianfrani, Chief
Regulatory Branch
Philadelphia District Corps
of Engineers
Second and Chestnut Streets
Philadelphia, PA 19106

215-597-2812 or 597-4723

*Ernest Leonardo
Philadelphia City Planning
Commission
1515 Market (3 Penn Center)
17th Floor
Philadelphia, PA 19107

215-686-4600

*Thomas L. Brand
Delaware River Basin
Commission
Box 7360
West Trenton, NJ 08628

609-883-9500

Clifford Day
U.S. Fish and Wildlife
Service
Ecological Service
Post Office Box 534
705 White Horse Pike
Absecon, NJ 08201

609-646-9310

*Jack Ford
Pennsylvania Department of
Environmental Resources
Bureau of Dams and
Waterways Management
3555 North Progress Avenue
Post Office Box 2357
Harrisburg, PA 17110

717-783-0471

*Darryl Jennus
Bureau of Coastal Project
Review
New Jersey Department
Division of Coastal
Resources
CN401

Trenton, NJ 08625

609-292-0060 or 609-292-0062

Ronald Bednar
Pennsylvania Department of
Community Affairs
State Office Building
Room 908
Broad and Spring Garden
Streets
Philadelphia, PA 19130

215-560-2256

**Leon Gonshor
Regional Director
Pennsylvania Department of
Environmental Resources
1875 New Hope Street
Norristown, PA 19401

215-270-1923

Stan Gorski
National Marine Fisheries
Service
Sandy Hook Laboratory
Highlands, NJ 07732

201-872-0200

Kirk Emerson
Bucks County Planning
Commission
The Alms House
Neshaminy Manor Center
Doylestown, PA 18901

215-345-3419

*Permitting Agency

**Issues permits for air and
water quality and waste
management

Karen Holm
Delaware County Planning
Department
Toal Building
2nd and Orange Streets
Media, PA 19063

215-891-5200

Mario DelVicario
U.S. Environmental
Protection Agency
Marine and Wetlands
Protection Branch
26 Federal Plaza - Room 1642
New York, NY 10007

212-264-5170

Khervin Smith
Pennsylvania Department of
Environmental Resources
Bureau of Water Resources
Management
Division of Rivers and
Wetlands Conservation
Post Office Box 1467
Harrisburg, PA 17120

717-783-0471

Beth Drost
Coastal Zone Coordinator
Delaware Valley Regional
Planning Commission
Bourse Building
21 South 5th Street
Philadelphia, PA 19106

215-592-1800

*Permitting Agency

